

MYCENAEAN AND NEAR EASTERN ECONOMIC ARCHIVES

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Раисе Алексеевне Козловой
посвящается

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Summary

The present research was conducted with the aim of better understanding of Linear B texts through the help of the Near Eastern parallels. The method chosen was the comparison between individual texts and groups of texts and not between the "models" reconstructed for this or that society. Several restrictions for such a comparison were set up. The comparison itself was limited to the problems of manpower (lists of personnel, ration lists, land-surveys). The best parallels for Mycenaean records of work-teams (male and female) were found among the Sumerian documents from the period of the Third Dynasty of Ur, for the quotas of conscripts from specific villages - in Ugarit, and for the texts dealing with the land tenure and the organisation of the cultic personnel - among the Hittite cuneiform texts and Luwian hieroglyphic Kululu lead strips.

The attempt was made to reconstruct the structure of the productive population in Mycenaean Greece and to find its place among other societies of the Ancient World.

LIST OF ABBREVIATIONS

A	Oriental Institute, University of Chicago (museum numbers)
AB	Assyriologische Bibliothek XXV J. B. Nies, <u>Ur Dynasty Tablets</u> , Leipzig, 1920
AC	<u>L'antiquité classique</u> , Bruxelles
AfO	<u>Archiv für Orientforschung</u> , Berlin
AHw	W. von Soden, <u>Akkadisches Handwörterbuch</u> , Wiesbaden, 1965-81
AJA	<u>American Journal of Archaeology</u> , Princeton
AJSL	<u>American Journal of Semitic Languages and Literatures</u> , Chicago
Anatolica	<u>Anatolica</u> (Institut historique et archéologique néerlandais à Istanbul), Leiden
An. Or.	<u>Analecta Orientalia</u> , Roma
AO	Antiquités orientales, Musée de Louvre (museum numbers)
AOS	American Oriental Series
Ar. Or.	<u>Archiv Orientální</u> , Journal of the Czechoslovak Oriental Institute, Prague
AŞ	R. D. Biggs, <u>Inscriptions from Tell Abū Ṣalābīkh</u> , Chicago, 1974
Ashm.	Ashmolean Museum (museum numbers)
ASJ	<u>Acta Sumerologica</u> , Hiroshima II T. Gomi, Neo-Sumerian Administrative Tablets in the British Museum, I III " " " II
Assur	<u>Assur</u> , Monographic Journal of the Near East, Malibu (California)
AT	D. J. Wiseman, <u>The Alalakh Tablets</u> , London, 1953
Athenaeum	<u>Athenaeum</u> , Studi periodici di letteratura e storia dell'antichità, Pavia
Atti Roma	<u>Atti e memorie del 1^o congresso internazionale di micenologia</u> , Roma, 1968
AWL	J. Bauer, <u>Altsumerische Wirtschaftstexte aus Lagash</u> (Studia Pohl), Roma, 1972

- BCH Bulletin de correspondance hellénique,
Paris
- BE The Babylonian Expedition of the University
of Pennsylvania
III D. W. Myhrman, Sumerian Administrative
Documents Dated in the Reigns of the Second
Dynasty of Ur from the Temple Archives
of Nippur, Philadelphia, 1910
- Belleten Belleten, Revue publiée par la Société
d'histoire turque, Ankara
- BIN Babylonian Inscriptions of the Collection
of J. B. Nies
VIII G. G. Hackman, Sumerian and Akkadian
Administrative Texts from Predynastic
Times to the End of the Akkad Dynasty,
New Haven, 1958
- BM British Museum (museum numbers)
- BSL Bulletin de la Société de linguistique,
Paris
- BSOAS Bulletin of the School of Oriental and
African Studies, London
- CAD The Assyrian Dictionary of the Oriental
Institute of Chicago, Chicago, 1964-84
- Cagnat R. Cagnat, Inscriptiones Graecae ad Res
Romanas Pertinentes, Paris, 1911
- Cambridge Colloquium Proceedings of the Cambridge Colloquium
on Mycenaean Studies (ed. L. R. Palmer,
J. Chadwick) Cambridge, 1966
- CHD The Hittite Dictionary of the Oriental
Institute of the University of Chicago,
(ed. H. G. Güterbock, H. A. Hoffner)
Chicago, 1980-83
- CM Colloquium mycenaeanum (ed. E. Risch, H.
Müllestein), Neuchatel/Geneva, 1979
- CRRAI Compte rendu de Rencontre assyriologique
internationale XVIII (ed. D. O. Edzard)
München, 1972

- CSA Cahiers de la Société asiatique
- CT Cuneiform Texts from Babylonian Tablets in the British Museum
 I, III, V L. W. King, 1898
 VII " " 1899
 IX, X " " 1900
 L E. Sollberger, 1972
- CTH E. Laroche, Catalogue des textes hittites, 2 ed.
 Paris, 1971
- CUOS Columbia University Oriental Studies
 III R. J. Lau, Old Babylonian Temple Records, New York, 1906
- Documents² M. G. F. Ventriss, J. Chadwick, Documents in Mycenaean Greek, Cambridge, 1973 (2 ed.)
- DP A. de la Fuyé, Documents présargonique, Paris, 1908-1920
- Emerita Emerita, Revista de linguística y filología clásica, Madrid
- Eranos Eranos, Acta philologica suecana, Gothenburg
- FGH F. Jacoby, Die Fragmente der griechischen Historiker, Berlin/Leiden, 1923-54
- Glotta Glotta, Zeitschrift für griechische und lateinische Sprache, Göttingen
- Historia Historia, Zeitschrift für alte Geschichte, Wiesbaden
- HLC G. A. Barton, Haverford Library Collection of Cuneiform Tablets or Documents from the Temple Archives of Tellah, I-III, Philadelphia/London, 1905-14
- HSS Harvard Semitic Series
 IV M. I. Hussey, Sumerian Tablets in the Harvard Semitic Museum II, Cambridge (Mass.), 1915
- HT Hittite Texts in the Cuneiform Character in the British Museum, London, 1920
- IBoT Istanbul Arkeoloji Müzelerinde Bulunan Boğazköy Tableterinden Metinler.
 I H. Bozkurt, M. Çiğ, H. G. Güterbock, 1944

- IC Inscriptiones Creticae, I-IV, ed. M. Guarducci, Roma, 1950
- IF Indogermanische Forschungen, Berlin
- IG Inscriptiones Graecae
XII ed. F. Hiller de Gaertringen, Berlin, 1895
- IM Die Inschriften von Magnesia am Maender, ed. O. Kern, Berlin, 1900
- IOS Institute of Oriental Studies, Cambridge, (museum numbers)
- Iraq Iraq (British School of Archaeology in Iraq), London
- JAOS Journal of the American Oriental Society, New Haven
- JCS Journal of Cuneiform Studies, New Haven
- JKF Jahrbuch für kleinasiatische Forschung, Heidelberg
- JNES Journal of Near Eastern Studies, Chicago
- Kadmos Kadmos, Zeitschrift für vor- und frühgriechische Epigraphie, Berlin
- Kahun F. L. Griffith, The Petrie Papyri. Hieratic Papyri from Kahun and Gurob, London, 1898
- KAJ E. Ebeling, Keilschrifttexte aus Assur juristischen Inhalts, Leipzig, 1927
- Kang I S. T. Kang, Sumerian Economic Texts from the Drehem Archive, Urbana, 1972
- II " " Sumerian Economic Texts from the Umma Archive, Urbana, 1973
- KAV O. Schroeder, Keilschrifttexte aus Assur verschiedenen Inhalts, Leipzig, 1920
- KBo Keilschrifttexte aus Boghazköi, Leipzig
III H. H. Figulla, O. Weber, 1923
XII H. Otten, 1963
XVI H. Otten, H. G. Güterbock, 1968
- KTU M. Dietrich, O. Lorenz, J. Sanmartín, Die Keilalphabetischen Texte aus Ugarit, Neukirchen-Vluyn, 1976
- KUB Keilschrifturkunden aus Boghazköi, Berlin
VIII E. Weidner, 1924
XII, XIII H. Ehelolf, 1925
XXI A. Götze, 1928
XXVI " " 1933

- XXXI J. Sturm, H. Otten, 1939
 XXXVIII L. Jakob-Rost, 1965
- LD C. R. Lepsius, Denkmaeler aus Aegypten und Aethiopien,
 I-VI, Berlin, 1849-58
- Le mond grec Le mond grec, hommages à C. Préaux, Bruxelles, 1975
- Lingua Lingua, International Review of General Linguistics,
 Amsterdam
- LS Landschenkungsurkunden
- Mar. Mast. A. Mariette, Les mastabas de l'Ancien Empire, Paris,
 1889
- MCAAS Memoirs of the Connecticut Academy of Arts & Sciences
- MCS Manchester Cuneiform Studies, Manchester
- MDP Mémoires de la Délégation en Perse, Paris
 II V. Scheil, 1900
 XIV " " 1913
- Minoica Minoica, Festschrift J. Sundwall (ed. E. Grumach),
 Berlin, 1958
- Minos Minos, Revista de filología egea, Salamanca
- MIO Mitteilungen des Instituts für Orientforschung, Berlin
- MPM M. Lejeune, Mémoires de philologie mycénienne,
 I Paris, 1958
 II Rome, 1971
 III Rome, 1972
- MS Mycenaean Studies (ed. E. L. Bennett), Madison, 1964
- MSS Münchener Studien zur Sprachwissenschaft, München
- MVAG Mitteilungen der Vorderasiatisch-Ägyptisch Gesellschaft,
 Berlin
- MVN Materiali per il vocabulario neosumerico, Roma
 I G. Pettinato, H. Waetzoldt, La collezione Schollmeger,
 1974
 II H. Sauren, Wirtschaftsurkunden des Musée d'artes
 et d'histoire in Genf, 1974
 IV L. Cagni, La collezione del Pontificio Istituto
 Biblico-Roma,
 G. Pettinato, La collezione della Collegiata
 dei SS. Pietro e Orso-Aosta, 1976

- V E. Sollberger, The Pinches Manuscript, 1978
- VI, VII G. Pettinato, S. A. Picchioni, Testi economici di Lagaš del museo di Istanbul, I-II, 1977-78
- XII T. Gomi, Wirtschaftstexte der Ur III-Zeit aus dem British Museum, 1982
- NAT D. I. Owen, Neo-Sumerian Archival Texts Primarily from Nippur in the University Museum, Oriental Institute and the Iraq Museum, Winona Lake, 1982
- Nebraska N. W. Forde, Nebraska Cuneiform Texts of the Sumerian Ur III Dynasty, Lawrence, 1976
- Nik. M. B. Никольский, Документы хозяйственной отчетности древнейшей эпохи Халдеи из собрания Н. П. Лихачева, I-II, СПб/М. 1908-15
- NTSS[✓] R. R. Jestin, Nouvelles tablettes sumériennes de Šuruppak au Musée d'Istanbul, Paris, 1957
- NY H. Sauren, Les tablettes cunéiformes de l'époque d'Ur des collections de la New York Public Library, Louvain-la-Neuve, 1978
- Or. Orientalia, Rom
- 4 A. Deimel, Die Vermessung der Felder bei den Sumerern um 3000 v. Chr., 1924
- 34/35 " Die Lohnlisten aus der Zeit Urukaginas und seines Vorgangers, 1928
- Oriens Antiquus Oriens Antiquus, Rivista del Centro per la Antichità e la Storia dell'Arte del Vicino Oriente, Roma
- PLG Poetae Lyrici Graeci, I-III, ed. T. Bergk, Leipzig, 1878-82
- PP La parola del passato, Napoli
- PRU Le palais royal d'Ugarit, Paris
- III J. Nougayrol, 1955
- V C. F.-A. Shaeffer, 1965
- VI " " 1970
- PSD The Sumerian Dictionary of the University Museum of the University of Pennsylvania, (ed. Å. W. Sjöberg), Philadelphia, 1984

RA	<u>Revue d'assyriologie et d'archéologie orientale</u> , Paris
REG	<u>Revue des études grecques</u> , Paris
Res Mycenaeae	<u>Res Mycenaeae</u> , Akten des VII Internationalen Mykenologischen Colloquium in Nürnberg 1981 (ed. A. Heubeck, G. Neumann), Göttingen
RF	<u>Rivista di filologia e di istruzione classica</u> , Turin
RHA	<u>Revue hittite et asianique</u> , Organe de la Société des Études Hittites, Paris
RIAA	L. Speleers, <u>Recueil des inscriptions de l'Asie Antérieure de Musée Royaux du Cinquantenaire à Bruxelles</u> , Bruxelles, 1925
RLA	<u>Reallexikon der Assyriologie</u> , Berlin, 1932-83
RP	<u>Revue de philologie</u> , Paris
RTC	F. Thureau-Dangin, <u>Recueil de tablettes chaldéennes</u> , Paris, 1903
SD	<u>Studi classici e orientali</u> , Pisa
Serta Indogermanica	<u>Serta Indogermanica</u> , Festschrift für G. Neumann (ed. J. Tischler), Innsbruck, 1982
Sh. S.	N. de Garis Davies, <u>The Rock Tombs of Sheikh Said</u> , London, 1901
SL	A. Deimel, <u>Sumerisches Lexikon</u> , Rom, 1925-37
SMEA	<u>Studi micenei e egeo-anatolici</u> , Roma
Sprache	<u>Die Sprache</u> , Zeitschrift für Sprachwissenschaft, Wiesbaden/Vienna
STA	E. Chiera, <u>Selected Temple Accounts from Telloh, Yokha and Drehem</u> , Philadelphia, 1922
StBoT	Studien zu den Boğazköy Texten, Wiesbaden
Studia Mediterranea	<u>Studia Mediterranea</u> , Pavia I Piero Meriggi dicata (ed. O. Carruba), 1979
Studia Mycenaea	<u>Studia Mycenaea</u> (ed. A. Bartoněk), Brno, 1968
Szlechter	E. Szlechter, <u>Tablettes juridiques et administratives de la III^e dynastie d'Ur et de la I^{re} dynastie de Babylone</u> , Paris, 1963

- TCL Musée de Louvre, Département des Antiquités Orientales, Textes
Textes cunéiformes, Paris
V H. de Genouillac, Textes économiques d'Oumma de l'époque
d'Our, 1922
- TCS Texts from Cuneiform Sources, Locust Valley (NY)
- TM Tell Mardikh (excavation numbers)
- TSA H. de Genouillac, Talettes sumériennes archaïques, Paris, 1909
- TSS R. R. Jestin, Tablettes sumériennes de Šuruppak conservée
au Musée de Stamboul, Paris, 1935
- TuT G. A. Reisner, Tempelurkunden aus Telloh, Berlin, 1901
- UCP University of California Publications in Semitic Philology
IX/2 H. F. Lutz, Sumerian Temple Records of the Late Ur Dynasty
Berkeley, 1928
- UET Ur Excavations Texts, London
II E. Burrows, 1935
III L. Legrain, 1947
IX D. Loding, 1976
- UNT H. Waetzoldt, Untersuchungen zur neusumerischen Textilindustrie,
Roma, 1972
- UT C. Gordon, Ugaritic Textbook, Rome, 1965
- VAT Vorderasiatische Abteilung der Berliner Staatsmuseum (museum numbers)
- VS Vorderasiatische Schriftdenkmäler der Königlichen Museum zu Berlin,
XIII H. H. Figulla, Leipzig, 1914
- WF A. Deimel, Wirtschaftstexte aus Fara, Leipzig, 1924
- YBC Yale Babylonian Collection (museum numbers)
- YOS Yale Oriental Series
IV C. E. Keiser, Selected Temple Documents of the Ur Dynasty,
New Haven, 1919
- ZA Zeitschrift für Assyriologie und verwandte Gebiete, Leipzig/
Berlin
- ŽA Živa antika, Skopje
- ВДИ Вестник древней истории, Москва
- ИГАИМК Известия Государственной Академии Истории Материальной
Культуры имени Н. Я. Марра, Москва
- СЭ Советская этнография, Москва

I PRINCIPLES OF COMPARISON

1. The reasons for comparison

Ever since the discovery that the Linear B texts were written in Greek, they have been studied for this very reason by Greek scholars. No student of Greek can however resist the impression that a huge gap separates Mycenaean written documents from the classical literary tradition: to begin with the material used for writing, the curious and inadequate system of the script and above all the subject of the texts themselves - all are completely unfamiliar to him. I suspect that the underlying reasons for some of the early rejections of the decipherment were the feelings of frustration its results created. Indeed, the Mycenaean "documentary evidence" looks dull and uninformative in comparison with the impressive monuments of Greek classical literature, as has been emphasised by Levin¹.

Unfortunately, thirty years of Mycenological research have produced as a convincing answer to hostile critics, neither a universally accepted picture of Mycenaean society, nor yet an unambiguous interpretation of almost any important Linear B document. The Mycenologists should not be blamed for this situation since the restrictions imposed by the material itself are severe: the Linear B corpus is too small to provide material for a fully independent elucidation of the meaning of each word from the context, while the writing system is too inadequate for Greek phonology to secure the identification of each word with its Greek equivalent. Even more important are the limitations imposed by the nature of the texts: the first surviving documents of a similar type were written in Greece only about 2,000 years later, during the Byzantine period², while the chronologically closest Greek texts and main pool of etymologies are Homeric epics. Obviously, the context and the vocabulary of the heroic epos differs so much from the Mycenaean inventories that even if etymologies could be safely established, the meaning of many words would remain obscure.

However, for a student of Assyriology the situation is reversed: everything but the language is familiar to him in the Mycenaean archives - from the use of clay tablets as writing material or the system of writing based upon the combination of syllabic signs with ideograms to the very types of texts which constitute more than 90% of all cuneiform material uncovered to date.

The idea of comparing these documents with the Mycenaean ones serves a very simple primary purpose of elucidation: if the interpretation of any particular text in the Linear B corpus is, for some reason, difficult or doubtful it would be surely helpful to check comparable texts written in a better understood language from a contemporary or near contemporary society. The first stage in such research is text to text comparison with the aim of achieving a better understanding of the individual Linear B texts through the help of Near Eastern parallels. The next stage is an overall assessment of all the texts which have been found to be similar, in order to establish some kind of typology.

Though the benefits of such a comparative method are generally acknowledged³, the actual work has never been done⁴. The state of publication and research of the Near Eastern economic archives must bear the blame: priority has always been given to the literary and historical texts while the vast majority of economic texts relevant for such a comparison still remains unpublished, and those that has been published are rarely transliterated and even more rarely translated⁵. Another problem is what kind of texts and from which type of archive are suitable for comparison. Is it justified, for example, to compare Linear B texts with the Hammurabi Law Code or any other Near Eastern legal documents?

What has been said above may be regarded as a justification of the need for a comparative approach to the Mycenaean archives; what follows now is a discussion of several methodological problems which may present themselves to the researcher pursuing such a course.

2. The types of archives ("chancellery" and "economic" archives)

Both the major Linear B archives, from Knossos and Pylos, were found in structures conventionally called "palaces" and almost exclusively within their storehouse areas. Remains of similar archives have been found also at Thebes, Mycenae (O1 series) and Tiryns. Only at Mycenae were several groups of tablets found in "private houses" in the lower town apart of the small number of fragments from the "palace" itself. Yet even in this instance the "private" character of these tablets should not be overestimated: they may well constitute private archives of palace officials - a phenomenon well known from the Near East⁶.

All the tablets, including the "private archives" from Mycenae, deal solely with economic activities: the control of income and outgoings, keeping stock of various goods or the organisation of work-teams. This fundamental fact determines the first important restriction for any attempt at comparison.

In the period from the invention of writing - about the end of the IV-th millennium B.C. - up to the middle of the III-d millennium B.C. all written documents from ancient Mesopotamia are of exactly the same type as the Linear B corpus. Only with the emergence of the Sumerian "school" - é-dubba, probably during the Fara period (about 2600 B.C.), the first non-economic "scholarly" texts composed during the process of teaching began to appear. Later, although economic texts still continued to constitute the vast majority of all cuneiform documents, the use of writing for communication was utilised by the government bureaucracy too. The tradition of writing for non-economic purposes, which goes back to the early Sumerian é-dubba, produced not only a flourishing literature but also gave birth to the royal chancellery which issued letters, instructions, orders and other administrative documents.

By contrast, the complete absence of such documents in the Linear B corpus suggests either that writing was restricted to economic needs

as in the earliest stages of Mesopotamian writing or that some perishable material other than clay was used for non-economic purposes. Since the Linear B script represents the very end of the Aegean tradition of writing which goes back to the Cretan hieroglyphs in the early II millennium B.C., the first possibility seems unlikely. As for the second possibility, we have only a few pieces of indirect evidence in its favour. First of all the linear form of the signs is hardly suitable for writing on clay, and the history of writing shows that the form of signs tends to accommodate itself rapidly to the material used for writing: cuneiform signs developed probably independently in Mesopotamia and Ugarit for use on clay, while in Egypt the original pictorial signs were converted to the cursive (hieratic) form for writing on papyrus⁷. Secondly, the Linear B inscriptions found on stirrup jars were painted and not scratched by stylus as on the clay tablets, which suggests that an alternative method of writing was also in use. Finally, the traces of parchment imprinted on the clay sealings from the Minoan deposit at Zakro show that they were used to seal parchment scrolls⁸.

If different materials were indeed used for writing economic and non-economic documents in Mycenaean Greece, this hypothetical situation agrees very well with the widespread Near Eastern practice of writing different types of documents on different types of materials and even in different languages⁹. Thus, in the Neo-Assyrian Empire (VIII - VII cent. B.C.) the royal chancellery at Nineveh worked in Akkadian and in the cuneiform script, but the economic documents were probably written in Aramaic on some perishable material and did not survive. For this reason, according to Parpola's calculation¹⁰, among the 5170 non-literary texts from Nineveh the largest groups are letters (3100) and legal documents (645), while the so-called "administrative documents" (450) consist in large part of descriptive appendices (land-surveys and census lists) to royal grants¹¹.

A similar situation is found in the Hittite Empire (XV - XIII cent. B.C.) where the great archive at Boghazköi consists of literary

texts and chancellery documents written in cuneiform script on clay tablets, while the economic documents were written probably in the Luwian hieroglyphic script on wooden tablets. The latter are frequently mentioned in the Hittite cuneiform texts where they are called ^{giš}HUR - "(wooden) carvings", or ^{giš}LE'U - "(wooden) writing board"¹². The context of such documents is sometimes described in Hittite as kapuessar (Sumerogram ^{SID} or Akkadogram MINUTI)¹³ - "account" or by the Luwian word lalami - "receipt"¹⁴. For example, in a legal text KUB XIII 35 (I 2-5) the subject of the wooden writing board (^{giš}LE'U) is described as a list (lalami) of chariots, bronze vessels, linen garments, bows, arrows, weapons, "deportees" (NAM.RA), oxen, sheep, horses and mules¹⁵; or, in the letter of queen Puduhepa (KUB XXI 38 I 19-20), wooden carvings (^{giš}HUR) are clearly opposed to the cuneiform texts (dub-ba-a-ja) - the former are in this case the lists of "deportees", oxen, sheep, and the latter are letters¹⁶.

Unfortunately for any possible comparison, these wooden tablets did not survive, and the only available example of documents of this kind are the so-called Kululu lead-strips¹⁷ from the later Neo-Hittite period (IX - VII cent. B.C.). The most serious implication of this observation is that the comparison of any Mycenaean text with sources from non-economic archives is methodologically unjustified. The greatest "loss" in this sense is of course the Hittite archive from Boghazköi - the most attractive one from the comparative point of view, since geographically and chronologically it is the nearest to Mycenaean Greece¹⁸.

The distinction between "chancellery" and "economic" archives is not however so absolute. Some economic documents were copied for a variety of reasons by chancellery scribes or quoted in the chancellery documents. The land-surveys surviving as descriptive appendices to the Neo-Assyrian royal land-donations or to tax-exemptions have been mentioned above. In other cases it can be successfully demonstrated that some Hittite cuneiform texts are based upon Luwian hieroglyphic

prototypes. Most explicitly this is stated in the Hittite inventory text IBoT I 31: "An account of the garment is written according to the wooden carving. Thus (said) the queen: 'When I shall put it in the house of the seal, they will make a clay tablet'" (I 13-15)¹⁹.

On the other hand, some texts of the "chancellery" type can be occasionally quoted in the economic documents. Thus, in the Pylian land-survey Eb 297/Ep 704 the dispute over the legal status of the land between the priestess (i-je-re-ja) and the "people" (da-mo) is recorded. We do not know of course whether this is a quotation derived from the verbal statement or from the written law-court record, but in a Hittite land-survey in the parallel place it states simply: DI-NU-kán iš-tar-na - "sub iudice" ("text A" Rs. IV 11)²⁰.

3. The types of the texts

Not all the "economic archives" available from the Near East are suitable for comparison with Linear B texts: one of the most peculiar features of the Mycenaean archives is the almost complete lack of any traces of trade.

It might seem strange to some readers that I call such documents economic at all, and indeed most scholars prefer the word "administrative" for the definition of this kind of archives. However only in the modern capitalist system is the market the most essential part of the economy, but in many ancient societies a non-market sector of economy existed²¹. Our texts deal primarily with the organisation of production and with the circulation of goods through such non-market exchange mechanisms as tribute in kind and rationing. Both activities must be regarded as economic in the full sense of the word, and I prefer this term to "administrative" since many chancellery documents deal with the administration proper - royal letters, orders and instructions.

Almost all the Linear B texts belong to three broad categories:

1) stock-keeping records ("inventories"), 2) registration of income, and 3) outgoings through rationing. Most of the contemporary Mesopotamian economic archives however consist mainly of purchase contracts and are thus unsuitable for comparison.

In the II millennium B.C. relevant texts can be found only among the relatively small group of Middle-Babylonian ration lists from the Kassite period²² in Mesopotamia proper, and in the periphery of the "cuneiform world" in Mari, Chagar-Bazar, Tell-Rimah, Nuzi, Alalakh and Ugarit. It is especially texts from Alalakh and Ugarit that are more readily used by Mycenologists for comparative purposes since they are almost contemporary and were found near to the Mediterranean coast where some contacts with the Aegean might be expected. When I began my research, holding no preconceived opinions on the matter, I found to my own surprise that the most relevant texts for comparative purposes are those from the Sumerian economic archives from the III millennium B.C., especially some of the texts from the Third Dynasty of Ur (the last century of the III millennium B.C.). On the other hand, many very similar documents are found in the much later (509-458 B.C.) Achaemenian archives written in Elamite, from the extreme Eastern periphery of the cuneiform writing area (Persepolis).

Since the main aim of the present research is the establishment of typological similarities and not a search for direct links between the Mycenaean written sources and parallels elsewhere, the chronological and geographical inconsistencies should not disturb us too much. In fact, some kind of typology is already implied in the chronological and geographical distribution shown above: comparable texts are found only in those periods and in those regions where rations were drawn for the maintenance of work-teams recruited for a compulsory corvée service. This so-called "ration system" flourished in III millennium in Mesopotamia where it generally died out in II millennium surviving only in the above mentioned places of the periphery²³. In the case of the Achaemenian archives from Persepolis, we can actually see how

the old ration system reflected in the "Fortification archive" written in 509-494 B.C. was partially replaced by payments in silver in the "Treasury archive" from 492-458 B.C.²⁴

Sumerian economic texts are usually classified according to the key-words which describe the type of activity recorded: su ba-ti - "received", zi-ga - "paid out", "spent", mu-tum - "came in", kurum₇-ak - "inspected", ni-kas₇-ak - "accounted" and so on. Such a classification is impossible for the Linear B material since verbs in general are extremely rare in the Mycenaean documents. Exceptionally we know in some detail only about the activity of one Pylian official - Akosota who "saw" (-wi-de, Eq 213), "received" (-de-ka-sa-to, Pn 30), "gave" (-do-ke, Un 267) and "allocated" (-da-sa-to, Wa 917) "objects" varying from fields (a-ro-u-ra, Eq 213) to perfumes (AROM, Un 267). From the non-verbal statement a-ko-so-ta-o a-ko-ra ("collection of Akosota", Cn 453) we also know that he "collected" she-goats since the substantive a-ko-ra can interchange with the verb a-ke-re (ἀγείρει - "(he) collects", Cc 660). Unfortunately, most frequently only the dative case indicates the recipient and if the written form of the word does not distinguish between the dative and the nominative, the direction of the movement of "goods" remains unknown. This precisely happens in Va 482 where the same Akosota is involved in the transaction of ivory: e-re-pa a-no-po a-ko-so-ta ZE - "ivory, Anopo to Akosota or Akosota to Anopo, (one) pair". According to the terminology of the so-called "archival approach" these six texts constitute the artificial "personal file" of Akosota. All three main groups of records are present here: inspection of the static situation, reception of the income and the distribution of rations.

But such a well defined group of texts is an exception rather than the rule in the Linear B archives. For this reason the Mycenaean documents are traditionally classified according to the ideograms which they contain. The main groups of texts according to this classification are: lists of personnel (A and B series), land-surveys (E series at Pylos and Tiryns), animal texts (C and D series), records dealing

with distribution, reception or stock-keeping of wheat (KN E), barley (PY Fn), olive oil (KN Fh, Fs, MY Fo, PY Fr), spices (G series), metals (J and K series), cloth (L series), flax (N series), wool (O series) and weapons (R and S series).

All these types of texts are well known from the Near East. Some differences are the result of the different climatic conditions or diet habits. Thus, in Mycenaean Greece women usually received rations of wheat and figs while men's rations consisted of barley, sometimes with olives, but in Mesopotamia barley was the most standard commodity used for rations (se-ba)²⁵. Of other commodities used as rations, figs, olives and wine naturally are not found in Southern Mesopotamia, while beer (kaš) and dates (su₁₁-lum) are found only there.

If we are now in the position to know what kind of texts we are looking for, the next question is how to compare the individual texts. Where, for example, does one expect to find the above mentioned key-words and ideograms?

4. The arrangement of the texts (colophons and headings)

To compare any pair of texts with one another we need first to clarify what we mean by saying that two particular texts are "similar". One problem is that in different scribal traditions the same information could be expressed in different ways in a text.

The typical "page-shape" Linear B tablet consists of the following elements: 1) the heading, 2) the syllabic signs written in horizontal lines from left to right, 3) the ideograms written to the right of the syllabic signs, 4) the numerals written on the extreme right of the tablet, 5) total at the bottom of the tablet (often absent). The normal arrangement of the Mesopotamian cuneiform tablet is almost exactly reversed: 1) the numerals at the left, 2) ideograms and syllabic signs are written in horizontal lines to the right of the numerals, 3) the colophon at the end. The most important fact is that the colophon combines the functions of the heading and the total, i. e. it represents

a brief summary of the whole text. Its position at the very end of the text underlines the general rule of the arrangement of the cuneiform tablet: from the particular information to the general one. Thus, the supervisors of the work-teams appear in the text after their workers, the senior supervisors after the junior ones and so on.

The Mycenaean practice was exactly contrary to this. Let us examine, for example, the text KN As 1517:

- r. 1. []-no re-qo-me-no
 2. []-si-re-u 1 a-di-nwa-ta 1
 3. []-sa-ta 1 ti-qa-jo 1
 4. da-wa-no 1 []-wo 1
 5. qi-qe-ro 1 wi-du- [] 1
 6. ku-ra-no 1 da-wi- [] 1
 7. e-ru-to-ro 1 ku-ta-i-jo 1
 8. ku-pa-nu-we-to 1 qa-ra-jo 1
 9. ri-zo 1 pa-na-re-jo 1
 10. ke-ka-to 1 to-so VIR 17
 11. o-pi e-sa-re-we to-ro-no-wo-ko
 12. po-to-ri-jo 1 pe-we-ri-jo 1
 13 a₃-ni-jo 1
- v. 1.
 2. za-mi-jo VIR 9
 3.

Line 1 is the heading, its beginning is broken and the preserved part reads: "the remaining (men)" (λείπόμενοι). Lines 2-10 are the list of the 17 names which are summarised on line 10: "so many men - 17". Line 11 is not a colophon as might be expected in a cuneiform tablet, but a second heading which includes the name of the senior supervisor: "at (the disposition of) Esareu the chair maker". Lines 12-13 list the junior supervisors, and finally line 2 of the reverse is the total of the unnamed workers of the second work-team which is under the second heading:

Table I (KN As 1517)

reqomeno	opi esarewe toronowoko
17 PN	3 PN
	9 zamijo

The use of headings is found occasionally in the Near East outside Mesopotamia proper: in Alalakh, Ugarit and Persepolis. The Ugaritic practice was especially close to the Mycenaean one - in the alphabetically written Ugaritic cuneiform texts not only were headings used instead of colophons but numerals were written in the right-hand part of the tablet. These similarities may indicate some direct links between the two scribal traditions, but what is more likely is that, as will be demonstrated below, in both cases these particular non-Mesopotamian features go back to the Egyptian influence.

In Egypt economic documents were normally written from right to left and, taking into account this reversed direction of writing, the text was arranged in exactly the same order as in Linear A and Linear B: 1) the heading, 2) the text written phonetically in horizontal lines, 3) the ideograms, 4) the numerals.

To clarify the similarities and the differences in the physical shape of the texts from different traditions, four texts are represented here on page 23: Egyptian (Kahun XXII 49-61)²⁶, Ugaritic (PRU V 106)²⁷; Mycenaean (PY An 1) and Sumerian (NAT 449, Ur III from Nippur). All four texts are lists of workers. The Egyptian and the Ugaritic texts consist of the names of the supervisors, the Pylian one of the places of origin of workers, and the Sumerian text consist of the legal status of workers ("hired men") and the names of the supervisors with their titles. The numerals in all four cases refer to the number of workers, but in the Egyptian text the additional column of numerals on the right-hand edge probably refers to the length of their service (in days).

The three headings read subsequently: (Egyptian) "[] in the district department of the corvée work, the fourth month of winter, the first, second and the third months of summer", (Ugaritic) "the list of men who enter the house of the king, and in the list let them be placed", (Mycenaean) "the rowers are going to Pleuron". The colophon of the Sumerian text which begins on the fifth line of the reverse reads: "the first day of the inspection, the middle field, the seventh month, 12 days passed, the inspector Ur-me-me, the second year of Ibbī-Sin". Thus, the Egyptian formulary of the economic text appears to be the most similar to the Mycenaean one while the Mesopotamian scribal tradition is the most different. Since the formulary of Linear B texts was most likely to be inherited from the Minoan Linear A,²⁸ any possible Egyptian connection should be searched on Minoan Crete which is obviously beyond of my scope.

As can be seen from the examples discussed above, the date is the important integral part of the Egyptian heading and the Sumerian colophon, but the Ugaritic and the Mycenaean texts are undated.

5. The dating systems

There were three most common dating systems in the Ancient World: eponymous years (Assyria, Greece and Rome), regnal years (Babylonia and Egypt) and the naming of the years by events. The last system was the earliest one in Egypt²⁹ and it was used in Mesopotamia during the second half of the III millennium B.C. and at the beginning of the II millennium B.C.³⁰ Thus, the date formula of the Sumerian text NAT 449 which was translated as "the second year of Ibbī-Sin" actually says: "the year when the en priest of Inanna of Uruk was chosen".

The Linear B texts are normally not dated at all, but one expression which is found as a heading of the set of 13 tablets from Pylos, looks suspiciously like a date: "when the lord appointed Aukewa as da-mo-ko-ro" (PY Ta 711). The actual meaning of the titles involved

(wa-na-ka - "the lord" and da-mo-ko-ro) are not very clear, but what is certain is that this phrase was used as a time indication of the inspection of numerous utensils and pieces of furniture. The appointment of a certain official was used as one of the "standard events" in the Sumerian date formulae³¹. On the other hand, it is not impossible that da-mo-ko-ro was an eponymous official. However this isolated evidence is insufficient to conclude either of these two dating systems was used in Mycenaean Greece.

Other methods of indicating time in the Linear B texts are dating by month (almost exclusively in the libation records KN Fp, PY Fr) and by one of the three following expressions: za-we-te ("this year"), pe-ru-si-nu-wa/o ("last year") and a₂-te-ro we-to ("next year") which are found in connection with taxation (PY Ma series), female work-teams (KN Ak series), sheep (KN Dc, Df, Dg, Dh, Do, Dp, Dv series), textiles (KN Lc, Le, Ln, L series) and chariot wheels (KN So 4442), either in full phonetic writing or in the abbreviated form (za, pe)³².

This peculiar system of dating is usually interpreted as an evidence of the fact that in Mycenaean Greece the written records were not kept for a long span of time and all the texts found at one particular site must all have been written during one single year³³.

Such a conclusion has very serious implication with respect to the quantity of Mycenaean written documents. The Linear B corpus is always regarded as a very small one in comparison to the impressive numbers of cuneiform tablets from the Near East. We must remember however that these numbers are the result of accumulated scribal activity over tens or even hundreds of years at the same site. The Linear B corpus consists of about 4600 tablets and fragments from five sites: about 3400 from Knossos, 1100 from Pylos, 73 from Mycenae, 40 from Thebes and 24 from Tiryns. Almost the same number of tablets (4700) came from the period of the Akkadian Empire (or Sargonic period) in Mesopotamia, but they belong to 20 archives from 16 sites and cover a period of about 200 years (about 2400-2200 B.C.)³⁴. Of course, the

life-time of each particular archive was much shorter. Thus, three archives from Sargonic Umma studied by Foster, consist of 487 tablets written during 34 years altogether³⁵, which gives us an average of 13 tablets per year! One may argue however that the Umma tablets were not excavated but acquired on the market so that these archives are probably very incomplete.

But "single-year archives" are also known in the Near East. The archive from Tell-Rimah³⁶ consists of 340 texts, 120 of which are economic (the rest are letters), about half of which are dated by the names of eponym officials (limmu). Though eight names of eponyms are found, 77% of the dated texts mention only one name (Ṣabum), while all the rest appear from one to four times only. A very similar situation is found at Chagar-Bazar³⁷: among about 100 texts uncovered there (all of them economic), 76 are dated and again 80% of them belong to the same eponymous year (of the limmu Adad-bānī), while the rest are distributed among seven years (from one to three texts in each year). Both archives were found in situ and in both cases the average is around 100 texts per year.

In fact, about 100 texts per year seems to be the most realistic average for the economic archives of the type discussed. It fits the archive from pre-Sargonic Lagash - one of the earliest dated archives of this type (1646 texts in 18 years)³⁸ and the "Fortification tablets" from Persepolis - probably the latest example of the non-monetary state-run economic system in the Near East (2087 texts in 15 years)³⁹.

Thus, from the comparative point of view, a single-year archive is much more likely to be of the size of the Linear A archives (146 tablets from Hagia Triada, 85 from Khania) than the size of the major Linear B archives. Only the 73 tablets from Mycenae are close to the expected "moderate" size of the single-year archive. However, only a negligible number of tablets (9) were found at Mycenae inside the palatial area, which suggests that the main palatial archive of the type discussed was destroyed either in antiquity or during the XIX

century excavations (the same is true in respect of Tiryns). The rest of the tablets from Mycenae constitute three small "private" archives: "House of the Oil-merchant" (31 tablets), "House of Sphinxes" (17 tablets) and the "West House" (11 tablets).

Thus, it should not cause astonishment that the mere 1100 tablets from the second large Linear B archive, at Pylos, appear to be an enormous quantity for a single-year archive. Only the Ur III period produced the comparable scribal activity. The exact number of the Ur III tablets in various public and private collections is unknown; it is certain only that there are hundreds of thousands of them⁴⁰. All these documents were written during about one hundred years (the last century of the III millennium B.C.) on five principal sites: Girsu, Umma, Puzrish-Dagan (or Šillush-Dagan), Nippur and Ur. Scribal activity on the Pylian scale would produce during the same period of time and on the same number of sites more than half a million texts, which is roughly the actual amount of texts written during the Ur III period.

I have no idea how to explain the 3400 tablets and fragments from Knossos. If all of them were really written during one single year, this scale of the bureaucratic productivity would be unprecedented by any standards. We cannot be sure however that the references to the "last year" and "this year" are sufficient evidence that all Linear B texts on each site were necessarily written during one year.

Occasionally this type of dating is found in the Sumerian economic texts in a very similar context: in association with some unidentified commodity NUXU-si (TSS^x 627, Fara period), fish (DP 280, 281, pre-Sargonic Lagash), sheep and wool (AB XXV 43, RTC 266, Ur II). The Sumerian expressions which were used in these cases are (mu) -im-ma ("last year") and mu-a ("this year")⁴¹. However, pre-Sargonic texts are dated by the regnal years of the Lagashite rulers as well, and Ur III texts are dated by the year formulae. Only the text from Fara (ancient Shuruppak)

is otherwise undated, as are the rest of the economic texts from this period. Nevertheless, the texts from Fara were not written during a single year, since the few purchase contracts from this site are dated by at least seven different eponyms ("bala-formulae")⁴². It is true that the Mycenaean usage of dating by the types of expression discussed was much more extensive than the Sumerian one, but the possibility that the tablets of Knossos, at least, were written during several successive years is still not out of question.

Yet another implication of the assumption that all the Linear B texts on each site were written during a single year is that this year was the last one before the final destruction of the Mycenaean sites, and that it is thus possible to find some textual evidence of the "emergency situation" on the eve of the invasion which led to the destruction of the palaces.

6. The "emergency situation"

Supporters of the "emergency situation" theory believe that they can demonstrate such evidences at least at Pylos⁴³. I am not prepared to discuss the evidence itself in this methodological chapter, though in my view it is so elusive that it could easily be dismissed as completely insufficient in the absence of a comparative study⁴⁴. But this may be the proper place to clarify the broader question of whether any real emergency situation could be reflected in documents of the type found in the Linear B archives. Crisis situations such as famine, foreign invasions or internal rebellions frequently occurred in Near Eastern history. Our knowledge of them largely depends on historical accounts and other narrative sources, but how were such situations reflected in the contemporary economic documents of the type discussed?

One of the rare instances when information from different types of sources is available, is the reign of the last king of Ur, Ibbi-Sin⁴⁵. This king reigned for 24 years before the destruction of Ur

by Elamites, but his empire virtually disintegrated much earlier, during years 5-11 of his reign. The years 7 and 8 were particularly ominous: nomadic incursions and famine caused the collapse of the bureaucratic machinery of the empire and the secession of many cities. A vivid account of this emergency situation is found in the correspondence of the king with his official Išbi-Erra (the future king of Isin)⁴⁶. Among the published economic texts from the city of Ur itself, about 400 texts are dated to these two years⁴⁷. The only indication that the situation was unusual is found in seven purchase contracts which show the prices to be sixty times higher than normal⁴⁸. All the rest of the texts are of the most routine character: the rations were issued, the work-teams supervised, the offerings made, the sheep counted and so on.

One can argue that after all the city of Ur survived the crisis and the king continued to rule in his capital for the next 15 years. The most obvious impact of the loss of empire was on the number of texts issued during these years, which fell drastically. Only four published texts are dated by the 23-d year of Ibbi-Sîn. They deal with transactions of silver (UET III 711, 712), copper (UET IX 410) and reeds (UET III 863). Among them two records of the delivery of silver for the making of rings and other pieces of jewelry were issued in the 12th month of this year i. e. only a few months before the final destruction of Ur.

This short account of one real emergency situation shows that such a situation can be reflected in chancellery documents such as letters, or by the indication of unusual prices in the purchase contracts. Neither of these two types of texts is found among the Linear B documents, which means that even if the conditions were those of a state of emergency when the texts were written, it is most unlikely that one would find any traces of such an "emergency situation" in the Mycenaean archives.

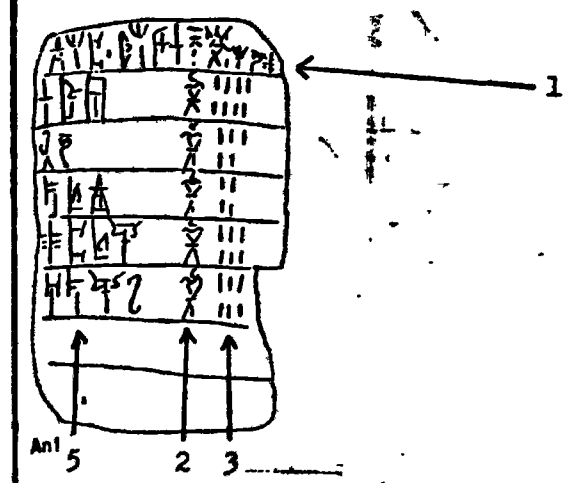
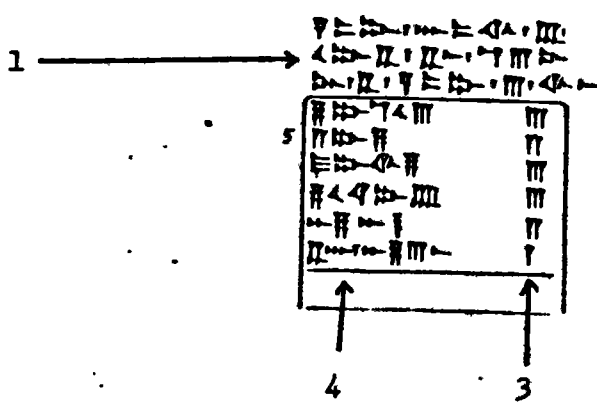
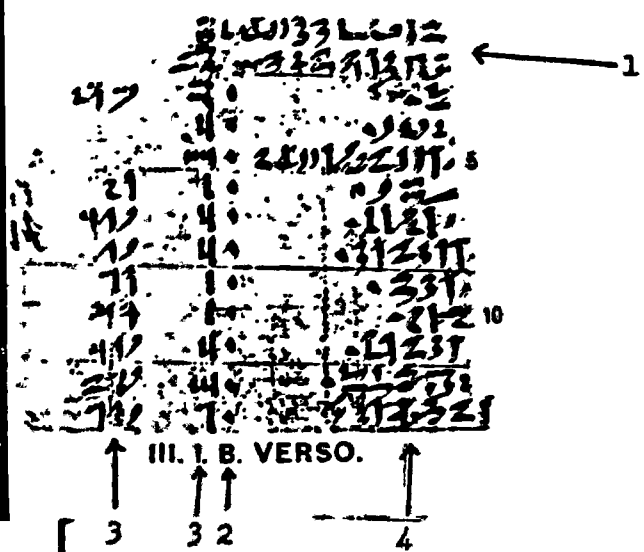
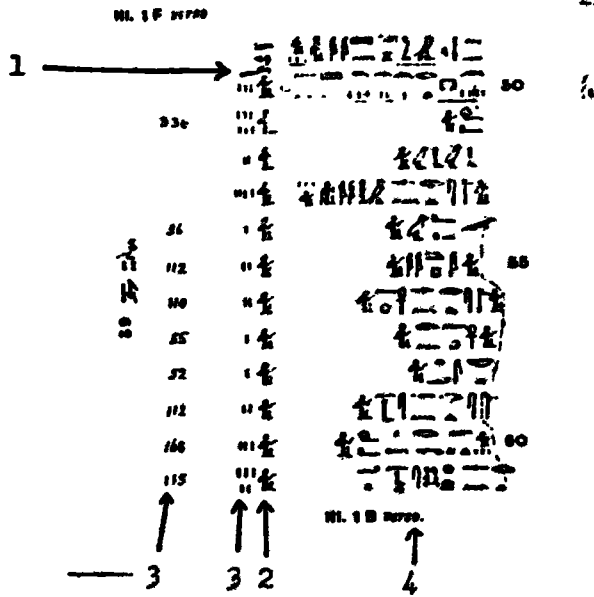
NOTES

1. S. Levin, The Linear B Decipherment Controversy Re-examined, NY, 1964, p. 244-246.
2. Earlier surviving economic texts from Hellenistic and Roman Egypt were written in Greek but come from the different country.
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4. The only attempt at a systematic but a very brief comparison was made by T. B. L. Webster, From Mycenae to Homer, London, 1958, p. 7-26.
5. For example, of more than one hundred thousands Ur III economic texts in the British Museum 1077 were published in cuneiform copies in CT I,III,V,VII,IX,X; MVN XII; ASJ II,III; 89 - in cuneiform copies and transliterations in H. Waetzoldt, Untersuchungen zur neusumerischen Textilindustrie, Rome, 1972; and 72 - in transliteration and translation in G. Pettinato, Texte zur Verwaltung der Landwirtschaft in der Ur-III Zeit (An. Or. 45), 1969.
6. For example the "Ur-Sara Archive" in Sargonic Umma. B. R. Foster, Umma in the Sargonic Period (MCAAS XX), 1982, p. 78.
7. A. Gardiner, Egyptian Grammar, Oxford, 1957 (the third edition), p. 10.
8. J. Weingarten, The Use of the Zakro Sealings, Kadmos 22, 1983, p. 8-13. This example is, of course, valid only for the Minoan period.
9. This problem was recently discussed during the XXX Rencontre Assyriologique Internationale at Leiden in July 1983 (Cuneiform Archives and Libraries).
10. S. Parpola, The Imperial Archives of Nineveh, 30 CRRAI 1983, (forthcoming).
11. Ibid.; J. N. Postgate, Taxation and Conscription in the Assyrian Empire (Studia Pohl 3), Rome, 1974, p. 37.
12. H. G. Güterbock, Das Siegeln bei den Hethitern, Symbolae Koschaker, Leiden, 1939, p. 36.
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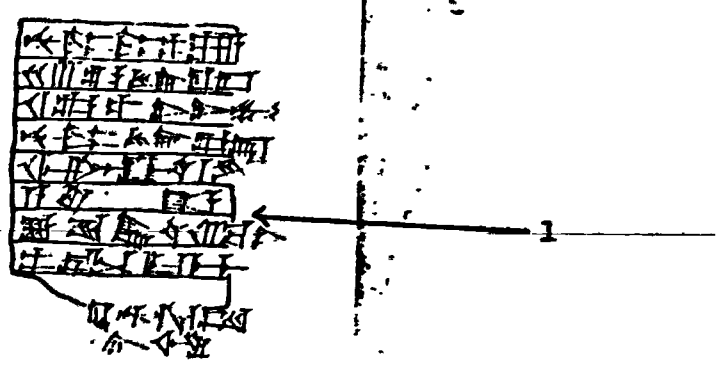
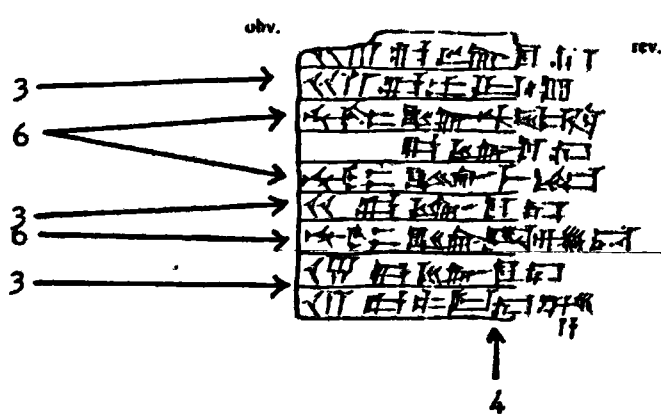
14. CHD III, 1, p. 26.
15. R. Werner, Hethitische Gerichtsprotokolle, StBoT 4, 1967, p. 4-5.
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17. S. Erdem, Le strisce di pombo di Kululu, Studia Mediterranea, Pavia, 1979, p. 143-164.
18. Several Hittite cuneiform texts classified as "lists" were found at Mağat but remained unpublished. They are catalogued in S. Alp, Die hethitischen Tontafelentdeckungen auf dem Mağat-Höyük, Belleten 44, 1980, No 97-113 (p. 33).
19. S. Kořak, Hittite Inventory Texts (CTH 241-250), Heidelberg, 1982, p. 4-6.
20. V. Souček, Die hethitischen Feldertexte, Ar. Or. 27, 1959, p. 20-21.
21. K. Polanyi, Primitive, Archaic and Modern Economies, Boston, 1971.
There is currently a tendency to exaggerate the importance of trade in Ancient Near East. I agree that the discovery of the free market in the III millennium Mesopotamia is important, but it cannot seriously undermine the basic fact that vast majority of existing records from this period deal with the non-market sector of economy. For discussion see papers of the XXIII Rencontre Assyriologique International, Birmingham, 1976 (Trade in the Ancient Near East), published in Iraq 39, 1977.
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24. R. T. Hallock, The Evidence of the Persepolis Tablets (Cambridge History of Iran II), Cambridge, 1971.
W. Hinz, Achämenidische Hofverwaltung, ZA 61, 1971/72, p. 276-279.
25. T. Jacobsen suggested recently that barley came gradually to overshadow other cereals in Mesopotamia during the III millennium B.C., because of the salinisation of the soil caused by overirrigation which made the cultivation of wheat too difficult. See his Salinity and Irrigation Agriculture in Antiquity (Biblioteca Mesopotamica 14), 1982.
26. The text is reproduced twice: in photograph and in normalised hieroglyphic transliteration.

27. Only half of the text is reproduced, the rest deal with a different subject.
28. J. T. Hooker, The Origin of Linear B Script (Minos Supplement 8), 1979.
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31. Usually elevation of the en priest (or priestess) in various temples.
32. J. Killen, Some Adjuncts to the SHEEP Ideogram on Knossos Tablets, Eranos 61, 1963, p. 81-90.
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34. B. R. Foster, Archives and Empire in Sargonic Mesopotamia, 30 CRRAI, 1983, Leiden (forthcoming).
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38. For the earlier publications of 1575 tablets see A. Deimel, An. Or. II, 1931, p. 71; a further 48 texts were published in BIN VIII, 1958, 20 texts in CT 50, 1972 and 4 texts in T. Jacobsen, Cuneiform Texts in the National Museum, Copenhagen, Leiden, 1939.
39. R. T. Hallock, Persepolis Fortification Tablets, Chicago, 1969, p. 1-3.
40. See note 5. Other major collections are in Istanbul, Baghdad, Berlin and Paris.
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L. C. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford, 1963, p. 103-106.
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(CBS 13719)



1. heading or colophon
2. ideograms
3. numerals
4. names
5. place-names
6. titles

II LISTS OF PERSONNEL

1. Women with children

Among numerous lists of personnel marked by the ideogram "man" (VIR) and "woman" (MUL) in two major Linear B archives were found closely connected sets which recorded work-teams of women accompanied by their children. In Pylos, these sets are classified as Aa, Ab and Ad, and in Knossos as Ai, Ak and Ap. Set Aa is subdivided into two groups - tablets No 60-98 and 240-1182 written by two different scribes (No 4 and 1 respectively), according to two provinces of the Pylian state, as is evident from two clay-labels, Wa 114 and 1008, both written by scribe 1. All Ab tablets correspond only to the second sub-group of Aa, and they are distinguished from this set by addition of rations of wheat and figs (ideograms GRA and NI). It is possible that these rations were summarised in the fragmentary tablet Fg 253, written also by scribe 1.

Set Ad as a whole corresponds to both sub-groups of Aa. It differs from the two previous sets, as it records not women but only their male children represented by ideogram VIR or the word ko-wo (boys), according to their age. Groups of children are described in this set by the same words as the women of Aa and Ab tablets, but in Ad they stand in the genitive plural feminine before the word ko-wo, which in this case may be translated as "sons of ...". The mutual relationships between these three sets may be illustrated by the following example:

Aa 792 ki-ni-di-ja MUL 21 ko-wa 12 ko-wo 10 DA 1 TA 1
Ab 189 pu-ro ki-ni-di-ja MUL 20 ko-wa 10 ko-wo 10 GRA 6T7 NI 6T7 TA DA
Ad 683 pu-ro ki-ni-di-ja-o ko-wo VIR 5 ko-wo 4

Words preceding the ideograms theoretically may describe women in four different ways:

1) a place-name that marks the actual location of the work-team, usually pu-ro or re-u-ko-to-ro, according to the "provinces" (these words are omitted in Aa, and were prefixed in Ab and Ad);

2) the place of origin of women and children in the form of a feminine adjective derived from the geographical name, or a place-name in the ablative (po-to-ro-wa-pi);

3) an occupational term;

4) a feminine derivative of a male personal name.

All four possibilities are realised only in one case - Ad 664:

pu-ro ra-u-ra-ti-jo ze-pu₂-ra-o ko-wo ri-ne-ja-o VIR 4 ko-wo 3

pu-ro is Pylos itself - the capital of the kingdom; ra-u-ra-ti-jo is derived from the well-attested place-name Rawarata - one of the seven principal "towns" of the Farther province; ri-ne-ja is one of the few understandable Mycenaean occupational terms and it means "flax-workers" (from λίϋov, Mycenaean ri-no); ze-pu₂-ra or ze-pu₂-ra₃ (in Aa 61) is uncertain but may be derived from the attested male name Zepu₂ro (Ea 56). The whole sentence may be translated as: "Pylos, Rawaratians, sons of female flax-workers of Zephyros, 4 men, 3 boys".

Knossos sets which roughly correspond to Pylian ones are much less homogeneous, and it is much harder to establish relations between them. Rations are recorded only in five Ai tablets (Ai 750, 751, 752, 5543, 7026), but they consist only of wheat without the addition of figs, as in the Pylian Ab set. The rest of the Ai tablets have no correspondence at Pylos, since both rations and DA and TA ideograms are absent. It is likely that at Knossos monthly rations were recorded separately as totals for large groups of women, in the E series, marked by the ideogram GRA (E 777, 847). DA and TA ideograms are found in the Ak set, thus corresponding to the Pylian Aa set. No correspondence to the Pylian Ad set is found at Knossos, but one tablet, Ap 629, seems to be a summary of female children from various Ak tablets:

Ak 624 1. ri-jo-ni-ja TA[] DA [
 2. ne di 3 ko-wa me-zo-e[
 3. ko-wo di 3 ko-wo me-zo-e[

Ak 630 1. tu-ni-ja [
 2. ne di 3 we-ko-we-ka-te[
 3. ko] -wo di 1 [

Ap 629 1. tu-ni-ja tu MUL 4 ne di 3 ko 1 ri-jo-no tu MUL 3 ko-wo 3
 2. do-ti-ja tu MUL 4 ne di 6 [

"tu" is the abbreviated form of the Greek word for daughter which is attested in full phonetic writing at Mycenae as tu-ka-te (MY V 659)¹, and such writing as tu MUL looks like the "female" correspondence to the Pylian expression ko-wo VIR in the Ad set.

Absent women (a-pe-a-sa) are recorded twice at Knossos (Ak 615, Ap 618). At Pylos another expression (o-pe-ro or its abbreviated form o)² was used in the Ad set (Ad 671, 679, 690) for counting the absent boys, but in the fragmentary tablet Ae 634 it is used in connection with women:] o MUL 7[. Written by hand 13, this tablet is associated with the "textile" La series, otherwise related to Aa, Ab sets.

The major difference between scribal habits in the two archives is in the division of children of Knossos not only by sex (ko-wo and ko-wa) as at Pylos, but also by age as me-zo-e (bigger) and me-wi-jo-e (smaller). Perhaps this division corresponds to the Pylian distinction between VIR and ko-wo in the Ad set.

Another peculiarity of Knossos scribal practice is represented by the use of syllabic signs as abbreviations, which are particularly numerous in the Ak set. The meaning of many of them is still unknown or doubtful. The tu sign as an abbreviation for the word "daughter" was discussed above; the signs pa and ne most probably stand for the words pa-ra-ja (old) and ne-wa (young) respectively, both words attested in full writing in the same context as descriptions of women at Thebes

(TH Of 34). The signs pe and za are presumably abbreviations for pe-ru-si-nu-wa (last year) and za-we-te (this year), both written in full in the Pylian "taxation" set Ma³.

The progress in interpretation of different words which describe the women in all Pylian and Knossos sets is very slow, and many occupational terms are still unintelligible, while the proposed explanations for others are based on mere guesses. After the discovery of the Theban Of tablets, more such words were recognised as feminine adjectives derived from male names, and thus Pylian terminology is found to be more closely similar to the Knossian than was earlier thought, because at Knossos male names in the genitive frequently precede the ideogram MUL⁴.

The major progress in the interpretation of the women-set as a whole was made when Palmer found a satisfactory explanation for the DA and TA ideograms. He succeeded in showing that the presence of these signs causes the addition of 5 and 2 units of wheat and figs respectively, or in other words of 2,5 and 1 ration for a grown-up woman⁵. The most plausible explanation of this fact, proposed by Palmer, is that both ideograms represent male and female supervisors of work-teams.

However, the main problem of the social status of the women who worked in these teams remains obscure. The earlier hypothesis of Tritesch that Pylian women of Aa, Ab sets were refugees from Asia Minor and other parts of the Aegean⁶ was proposed before the discovery of the real nature of DA and TA ideograms, and now is generally abandoned. The most accepted view in modern scholarship is that these women were slaves.

The arguments on behalf of this view were clearly summarised by Chadwick:

"It is hard to imagine women and children in this situation, fed and presumably housed by the palace, unless their status was effectively that of slaves... The fact that in all cases they have their children with them argues against any system of corvée labour; for if the women were required to do so many days' work a year for the palace, and were fed by the palace only for that period, it is surely incredible that they would have brought their children and drawn rations for them too. A community will always ensure that old women look after the children in their mothers' absence, apart from babies in arms. It is thus most likely that these women were permanently dependent upon the palace, and whether they were actually known as 'slaves', then matters little. The group of young men mentioned above would hardly have had such a curious description, unless they are the sons of slaves.

The absence of male slaves, apart from these, is some confirmation of their status. It is one of the facts of ancient life that it requires a high degree of social organisation to keep men in a state of permanent slavery. Thus on capturing a town or conducting a slaving raid, it was customary to put to death all adult males, and to take captives the women and children."⁷

As is evident from this passage, as well as from many others, the conclusion about the servile status of women is based entirely on formal structure of the texts and common-sense considerations. In such circumstances the most natural procedure, in my opinion, is to check what kind of people were recorded in any other groups of texts, outside the Linear B corpus, of the same or similar structure, namely: work-teams of unnamed women accompanied by children, without men, under supervisors, and separate lists of children described by occupations of their mothers.

Regrettably, such a comparison has never been done. Only from

the opposite direction Linear B "women-texts" were utilised by Gelb⁸, as the sole existing parallel to one particular group of Sumerian economic records, known to Sumerologists as "gemé-dumu" texts. These two groups of texts, one Mycenaean and the other Sumerian, are in fact similar to each other even in minor details more than any other parallels elsewhere, despite the absence of any connection between the two civilisations and the time-gap of about one millennium. Although the great majority of the relevant texts came from the period of the III Dynasty of Ur, the term "gemé" which was applied to women in these texts has a long history which goes back to the end of the IV millennium B.C. The history of this word was recently summarised by Gelb who came to the following conclusions:

"I do not know of a single word in the broad field of Sumerian lexicography that has been mistranslated more consistently than the word gemé. Since gemé is the female counterpart of the masculine arád 'slave' in legal texts, it has been taken for granted that gemé means 'female slave', 'slave woman' wherever else it occurs, and that includes masses of administrative texts pertaining to large public households...

While I have no statistics to substantiate it, it is my feeling that the translation of gemé as slave woman fits no more than about two per cent of all texts ...

In innumerable cases, gemé is simply the counterpart of guruš. As guruš means 'man' (in the sense of vir, Mann, not homo, Mensch), so gemé means 'woman'. The classical examples are texts that deal with rations of the dependent personnel...

The term gemé denotes not women, generally, but women of dependent classes, specifically, as gemé is usually sharply distinguished from the term SAL used for women of independent classes... In my reconstruction, the Sumerian

term gemé 'woman' came to be used, probably already in protohistorical times, for all sorts of women of dependent classes, from the qualified dependency of wives of free peasants, to serfdom, to chattel slavery."⁹

For the first time texts that bear the colophon še-ba gemé-dumu - "the barley rations for women and children", appear in pre-Sargonic Lagash¹⁰. However, they cannot be regarded as exact parallels to the Mycenaean texts, since when women with children are listed in Lagash separately, they are usually named, and when unnamed they are grouped together with other people (igi-nu-du_g, fl etc.)¹¹.

During the Sargonic period named and unnamed women with children are usually listed together with men. Only in two small fragments from Susa they are listed separately (MDP XIV 11, 61), but these could be fragments of larger lists such as MDP XIV 51, which include both men and women.

Only from the period of III Dynasty of Ur we have plenty of texts which are the most exact parallels to Mycenaean "women-sets": separate lists of unnamed women with children in occupational context, and separate lists of children with matronymics.

This relatively short period in Mesopotamian history is best documented with its economic texts. Women (gemé) are recorded in two different types of texts: "labour records" and "ration lists". Texts of the first type (most of them from Umma)¹² recorded the work prepared by women, in the same way as by men, according to the formula:

X gemé/guruš u₄-l-šè - "X women/men for one day"

which is followed by a description of the work, its location (often the name of the field), the name of the supervisor and date (day, month and the year). Women are always recorded in these texts without children, but this does not necessarily mean that they were not

accompanied by them during the work. Numbers of men or women in "labour records" are often expressed by fractions, and so it is clear that scribes recorded not actual workers but some sort of work-power units, like the modern manpower-day. For example, in the labour-record UET III 1404 a group of women under supervisor (nu-banda) Tūram-ili is recorded without children, but in ration-lists UET IX 45 and 65 the same women under the same supervisor appear with children.

Ration-lists record distribution of different commodities, usually barley (še), but also emmer (ziz), flour (zi), bread (ninda), oil (i), fish (ku₆), dates (su₁₁-lum), wool (si₆), and cloth (tú₆), to the personnel of different "households" (e) - temples, palaces, or other state-managed economic units.

Women are recorded in these lists in many different ways: named and unnamed, separately or with men, with or without children. I was able to find among such records 21 separate list of unnamed women with children (most of them from the district of Lagash): UET IX 45, 63, 65; MVN VI 71, 426, 456, 532, VII 141; YOS IV 67; RA XXIV p. 45; UNT 18; ASJ II 54, 60, 62, 75, III 108; CUOS III 95; BM 13837, 14526, 15902, 15245 (unpublished)¹³. A further 13 texts record women together with small number of men, quite uncomparable with the number of women: UET IX 76, 107; MVN VI 96, 105, 335, 359, 406, 492; MVN V 266; HSS IV 18; UNT 15; Szlechter pl. LIX (IOS 37); BM 28417 (unpublished)¹⁴.

Among all these texts, the most important is BM 28417 which is a summary of 6621 female weavers (gemé-uš-bar) with 3141 children in all five "towns" of the province of Lagash: Girsu, URUxKÁR, Lagash, Guabba and Kinunir or Nina (this place-name is broken), written during the 48th year of Šulgi. 1045 women of Girsu with 626 children reappear again on UNT 18 issued during the same year, and 1019 of them with 666 children are recorded on UNT 15 from the ninth year of Amar-Sîn or ten years later.

Some other texts constitute closely related sets dealing with the same groups of women during relatively short periods of time.

UET IX 45, 63, 65 from Ur record work-teams under the same three supervisors (nu-banda) : Pišahil, Tūram-ilī, and Lú-gina. MVN VI 71, 426, 456, 532, VII 141, are records of female millers (gemé-kikkén) of the "new palace" (é-gal-gibil) under two supervisors (ugula) Lú^d-Nin-šubur son of Ur-sa₆-ga and Lú^d-Nin-šubur son of Ur-ba-garā, from the tenth month of year 33 of Šulgi to the twelfth month of the following year. MVN VI 105, 335, 492 are records of large team of women under the same supervisor (ugula) Šu-na and five small teams of men and women, each under its own supervisor, in é-nam-dumu ("house of the prince") during the second, fifth and eleventh months, but without dating by the year. MVN VI 96 and 359 are exact duplicates, as far as they are preserved, which record women of two "households" - é-gemé-ba and é-ga-na-ki-na, under two supervisors Gal-zu-ga-ri-si and Šu^d-Nin-šubur (the last name not preserved in MVN VI 96) . HSS IV 18 and MVN V 266 are very similar records of ten and six groups each, consisting of one to three men and 20-30 women with children. However, precise relations between the two documents cannot be established since MVN V 266 does not bear a colophon, and the names of the supervisors are different.

ASJ II 54, 60, 62, 75, III 108; CUOS III 95; BM 13837, 14526, 15245 are all very similar small tablets, each recording one group of women with children. ASJ II 62, III 108, CUOS III 95 and BM 15245 are lists of female weavers under the same supervisor Ur^d-Da-mu, from the seventh month of the 34th year of Šulgi, the second month of the following year and the tenth month of the 43rd year of Šulgi (CUOS III 95 is undated). ASJ II 54, 60, BM 13837 and 14526 record the same team of female millers from the ninth month of the 34th year of Šulgi to the eighth month of the following year.

RA XXIV p. 45 and YOS IV 67 are parallel records of 113 women with 59 children described as captives (nam-ra-ak), and presented ex-voto (a-ru-a) to the temple of Šara at Umma. IOS 37 is a list of totals (šu-nigin) bearing the colophon: kurum₇-ak gemé-dumu - "inspection of women and children" in the temple of Nin-urra. BM 15902 is the earliest example of this kind of document - it is dated by

the eleventh year of Šulgi, and deals with distribution of wool to three teams of women and children, each under a supervisor. Finally, MVN VI 406 is a letter (as such, it is transliterated and translated by Sollberger in TCS I 335); but the list of women and children itself can be regarded as a quotation of an actual record (which is mentioned: im še-ba-a - "the tablet of rations"). The regular formula "say to PN" (PN-ra u-na-a-du₁₁) is not placed at the beginning as usual, but after this list.

As a good example of the simplest form of the texts discussed above, BM 15245 can be represented here:

- Obv. 1. 9 gemé 60 (silà) še (gur)-lugal-⟨ta⟩
 2. 7 gemé 50 (silà)-ta
 3. 77 gemé 40 (silà)-ta
 4. 24 gemé 30 (silà)-ta
 5. 3 gemé á-½ 30 (silà)-ta
 6. 5 gemé šu-gi, 20 (silà)-ta
 Rev. 1. 33 dumu 15 silà-⟨ta⟩
 2. 30-lá-2 dumu 10 (silà)-⟨ta⟩
 3. še-bi 18 (gur) 255 silà-gur
 4. še-ba gemé-uš-bar
 5. ugula ur-^dda-mu
 6. iti ezen-^dšul-gi
 7. mu kár-har^{ki} a-rá-3-kam-aš ba-hul

"9 women per 60 (quarts) of barley (according to) 'royal' (bushel), 7 women per 50 (quarts), 77 women per 40 (quarts), 24 women per 30 (quarts), 3 women of half-wage per 30 (quarts), 5 old women per 20 (quarts), 33 children per 15 quarts, 28 children per 10 (quarts), their barley: 18 bushels 255 quarts, barley rations (for) female weavers, supervisor Ur-^dDamu, seventh month, year when Karhar was destroyed for the third time (Šulgi 34)"

The place-name is not indicated here, but the tablet is dated

by a month of Lagashite calendar, and this work-team must be located in one of the townships in the district of Lagash. Division of women and children according to the quantity of their rations, as well as separate indication of old women (šū-gi) and young women with half rations (ā-ē)¹⁵, are typical for this kind of document. Children are sometimes divided by sex: dumu-nita and dumu-mī (boys and girls, respectively), or by age - dumu-gaba or dumu-ga (sucklings). In a few cases sucklings are divided by sex, as well: dumu-nita-gaba and dumu-mī-gaba (UET III 1033, 1040, UET IX 66, 90, BE III 107, 110)¹⁶.

The most frequent professions of women are milling (gemé-kikér) and weaving (gemé-uš-bar), but many other occupational terms are mentioned elsewhere¹⁷. Ugula (written by the ideogram PA) is the most usual title of a supervisor, but officials of high rank (nu-bandà, šabra, ensī) are also involved in supervising and inspection of work-teams¹⁸; female supervisors (zīlulu, written PA+ULU₃) are mentioned as well (CT 18344, UET III 1519, STA 10, MVN II 176)¹⁹. In long lists, groups of women are frequently described as libir - "old", in the sense "previous", or "original ones" - as opposed to daḥ - "additional". Among the texts represented above such division is present in MVN VI 105, 335, 492, and is found in numerous other lists of named men and women (the best example is MVN II 175).

Separate lists of children with matronymics are much less frequent than lists of women with children. Three such lists are very similar, and seem to be connected in some way: STA 4, HLC I 248 and HSS IV 49. STA 4 and HSS IV 49 are records of distribution of wool to children in the first year of Amar-Sîn (STA 4 is dated by the fifth month and HSS IV 49 is undated by month). HLC I 248 records barley rations issued from the first to eighth month in the 45th year of Šulgi (two years earlier). In HSS IV 49 and HLC I 248 children are called gīr-se-ga-lugal - "personnel of the household of the king". Some idea about the purpose of such lists can be gained from STA 4 and HSS IV 49, where a few old people (7 and 1 respectively) are listed together with children (83 and 57), as recipients of reduced

rations. However, both children and their mothers in this group of texts are named, unlike the children of the Pylian Ad set. More similar to the Pylian material is the text MVN VI 538, where mothers of the named children are mentioned in most cases only by their professions: gemé-ì-sur-ra, gemé-kikkén, gemé-uš-gíd-da. These children are divided among five "households", among them é-d^dinanna and é-d^dgiš-bar-è, and women of the same two "shrines" ²⁰(among eight others) are recorded as recipients of wool in MVN VI 131, some of them under the same professional designations. These two texts are thus connected in the same way as the Pylian Ab and Ad sets. But the most exact parallel to the Ad tablets is found in CT IX 21250, where among other recipients of barley is mentioned a large group of people called un-í1 dumu gemé-é-gibil located in Guabba in Lagash district. Un-í1 is the social term which probably denotes some definite fraction of "guruš class"²¹. Their mothers, called "women of the new house", may be the same women who were recorded as gemé-é-gal-gibil ("women of the new palace") in MVN VI 71, 426, 456, 532, VII 141 (though the text is dated by the 45th year of Šulgi, i. e. eleven years later).

The problem of the social position of these women and children is naturally connected with the problem of the social status of guruš, and it is a very difficult one. The word guruš in itself is not a social term, and it means simply "man in the age of full maturity", but men and women called guruš and gemé were recorded as members of work-teams and recipients of rations in so uniform way that it seems they belong to some definite social class.

Concerning the nature of this "guruš class", three different views have been advanced. Most Soviet scholars from Struve²² to Djakonov²³ argue that though guruš were legally distinct from slaves (ir or arád), from an economic point of view their position was not much different, since most of them worked twelve months a year for royal or temple "households", and had no means of maintenance other than rations. According to Gelb²⁴, people called guruš and gemé constituted a separate

social class of semi-free population, distinct both from slaves and from free peasants (engar). On the other hand, Grégoire sees no difference between guruš and other groups of free population²⁵. The crucial question, whether guruš had any means of maintenance other than rations, cannot be positively solved since private lands are not recorded at all in the Ur III documents, but both Djakonov and Gelb argued for different reasons that such lands existed in this period²⁶. However, the answer to the second important question, for how much time guruš worked in teams, can be found in ration lists.

Let us first examine BM 28417. This text has a colophon: še-ba-killib-ba gemé-uš-bar ašlag ù gír-sè-ga-é-uš-bar - "final account of barley rations of female weavers, fullers and personnel of house of weavers". All rations are subdivided into "monthly rations" (še-ba-iti-da) and "annual rations" (še-ba-zag-mu-ka)²⁷. Recipients of monthly rations belong to three large groups: gemé-uš-bar (female weavers) - the largest group which includes thousands of women and children and, surprisingly, small number of men (guruš); un-il-é-uš-bar (un-il of the house of weavers) - in the colophon they are probably called "fullers" (ašlag); gír-sè-ga-é-uš-bar (personnel of the house of weavers) - only totals (šu-nigin) for this group are preserved. Recipients of annual rations are very few, they are called nu-dab₅ - "not holding (plots of land)"²⁸, and their professions are: lú-gu - "flax-workers", túg-du₈ - "tailors" and ì-du₈-é-uš-bar - "porters of the house of weavers".

It follows from this illuminating text (which is tabulated on Table II) that only very few specialised workers in the "house of weavers" received annual rations and had no plots of land, while all the rest, including all women with children received their ration on monthly basis. Is it possible now to determine more precisely for how long they worked for the state?

In comparison with the Mycenaean material the Sumerian economic

Table II (BM 28417)

še-ba-iti-da	Girsu	URUxKÁR	Lagash	[]	Guabba	totals
<u>gemé-uš-bar</u>						
gemé 100 silà	13 ²⁹			1		17
gemé 60 silà	149			4		209
gemé 50 silà				8		19
gemé 40 silà	684		12	98	660	1574
guruš 40 silà						61
gemé 30 silà	199	31	74	526	3381	4604
guruš 30 silà					48	48
dumu 20 silà	199	1	10	54	183	473
dumu 15 silà	141	10	20	93	700	1035
dumu 10 silà	[]4	5	23	124	1019	1633
gemé-šu-gi ₄ 20 silà	52		2	16	123	198
<u>un-í1</u>						
guruš 60 silà	3			25	255	
guruš 50 silà	2			60	20	
guruš 40 silà	2				42	
<u>gír-sè-ga</u>						
guruš 60 silà				1		32
guruš 50 silà				1		15
guruš 40 silà				2		7
guruš 30 silà				1		9
dumu 20 silà						2
dumu 15 silà						6
dumu 10 silà						8
še-ba-zag-mu-ka						
<u>nu-dab₅</u>						
guruš 4 gur	11					11
guruš 2 gur 120 silà	6					6
guruš 2 gur	1					1
lú-gu 2 gur 120 silà	2					
túg-du ₈ 2 gur 120 s.	1					

texts have a great advantage, since they have time dimension, and series of several texts concerning the same work-team during a considerable period of time can be established, and such series can be found among lists of women represented above. The most informative of them is a group of texts dealing with two teams of female millers in the new palace during the 33rd and 34th years of Šulgi (MVN VI 71, 426, 456, 532, VII 141). Monthly distribution of women and children in these two teams is represented in Table III.

Table III

ugula	Lú- ^d Nin-šubur dumu Ur-ša ₆ -ga						Lú- ^d Nin-šubur dumu Ur-ba-gara				
year	Š. 33	Šulgi 34					Š. 33	Šulgi 34			
month	11	1	2	3	11	12	10	11	1	2	3
gemé 40 silà	10	9	6	3	29	35	32	14	20	18	7
gemé 30 silà	-	-	1	-	3	3	6	1	5	4	4
dumu 20 silà	2	6	5	1	5	5	14	1	18	18	12
dumu 15 silà	3	6	3	1	6	7	12	4	10	10	7
dumu 10 silà	-	2	2	-	1	1	7	3	5	4	3
gemé-šu-gi ₄ 20 silà	-	1	1	-	-	-	-	-	-	1	1
gemé-šu-gi ₄ 10 silà	-	-	-	-	-	1	-	-	-	-	-

Additionally, the first supervisor employed 16 women with 2 children for 24 days during the first month of the year 34, and the second - 40 women for 6 days in the tenth month of the year 33, 9 women with 2 children for 14 days in the first month of the following year, and 4 women for 10 days in the third month of the same year.

Numbers differ so much from month to month that they can hardly represent the permanent staff of the "household". This case is self-

evident since the mill-house of the new palace employed different number of women during the year, but other "households" employed approximately the same number of workers during several years. For example, the weaving establishment at Girsu employed 1045 women in the 48th year of Šulgi (BM 28417, UNT 18), 1051 in the following year (HSS IV 3, total only, without children), and 1019 in the ninth year of Amar-Sin (UNT 19). Many other documents recorded the issue of rations for twelve months by the same "household" for its personnel. One of the most interesting of them is the text from Umma (Nebraska 42) which records month after month 153-157 gemé per 30 silà and 19 gemé-á-š, twelve times a year. But can we be sure that in such cases the women are the same all the time? To answer this question, we must proceed to lists of named persons.

The most interesting example of this kind is a unique series of 25 texts which records day-by-day account of work-power in a single mill-house (é-kikken) at Sagdana (district of Lagash) during one year (Amar-Sin 9)³⁰. This mill-house employed from 31 to 49 men and women throughout the year, but more than one hundred different persons are mentioned in the whole group of texts. Distribution of their names in chronological order shows clearly that only 12 workers constitute the permanent staff and are present in all the texts. 14 worked from the fourth month to the sixth; they were replaced by 16 others, who worked from the ninth month to the eleventh. All other workers (about 60) were employed for a month or even a few days. Since I studied this remarkable group of documents in a separate article, in the present discussion I restrict myself to the representation of female workers employed in this mill-house. Distribution of their names in the texts is shown on Table IV.

Only one name - Gemé-dBa-Ú - appears throughout all the year, but most probably two different women bore it, since Gemé-dBa-Ú that appears from 10/9 has a child (Ama-du_g). Thus, the mill-house at Sagdana did not employ women at all in 3/4, 8/9, and again in 8/4 of the next year. From 13/5 to 30/6 three women were employed, in

Table IV

year	Amar-Sin 9																								Š.S
day	3	13	14	16	25	28	6	10	12	13	30	8	10	11	22	25	26	28	5	[]	11	23	[]	[]	8
month	4	5	5	5	5	5	6	6	6	6	6	9	9	9	9	9	9	9	10	10	11	11	11	11	4
né (total)		3	3	3	3	3	3	3	[]	3	3		3	3	3	3	3	3	[]	3	3	2	2	2	
ba-ŭ		x	x	x	x	x	x	x	[]	[]	x		x	x	[]	[]	x	x	x	x	[]	x	x	x	
l-HAR-ša ₆		x	x	x	x	x	x	x	[]	[]	x														
-na		x	x	x	x	x	x	x	[]	[]	x														
-zi-mu													x	x	[]	[]	x	x	x	x	[]	x	x	x	
i-ša ₆ -ša ₆													x	x	[]	[]	x	x							
in]-ab-kù-ga																			x	[]	[]				
nu (total)													1	1	1	1	1	1	[]	[]	1	1	1	1	
ig/tu													x	x	[]	[]	x	x	x	x	[]	x	x	x	

10/9 they were replaced by another three, one of them with a child. After a month one of them (Nin-lú-ša₆-ša₆) was again replaced by another woman (with partly broken name), and in 23/11 we find a team reduced to two women. Replacement rate of workers in these documents cannot be explained by their decease, since dead persons (ba-ug₆) are mentioned in the chronologically first (3/4 Amar-Sin 9) and last (8/4 Šu-Sin 1) texts and they are the same in both cases.

Another set of four texts from Umma (STA 14, 15, 16, NY 120) records the same team of women in the second and the twelfth month of the second year of Ibbi-Sin. Unfortunately, women are not specified by any general term in this group of texts. Oppenheim³¹ and after him Gelb³² proposed that they were lukur³³ women in the temple of Šara. However, this view is based on the assumption that this set is connected with two lists of lukur of Šara (An. Or. VII 296, Ashm. 1924.668)³⁴

written in the second year of Šu-Sîn or nine years earlier. Though 18 names are common to both groups of texts, Sumerian onomastics (especially in the texts from the same city) is a poor guide for the identification of the same persons. Under close examination it becomes clear that these two groups of texts are arranged in a different way: in An.Or. VII 296 and Ashm. 1924.668 women are divided into two teams, each under a female supervisor, and in both teams group of women without patronymics is followed by women with patronymics; in STA 14, 15, 16, and NY 120 supervisors are not mentioned and patronymics are not regularly used, but most of women are specified by some obscure professional designations (AR, BA, BI, DAB₅, GU₄, ÍB, TÚG, ZA) which are found only in this group of texts.

Chronologically the first text STA 14 is dated by the second day of the second month of the second year of Ibbi-Sîn, and 47 women are listed there. The next two texts, NY 120 and STA 16, are almost duplicates and are dated by the 11th and 13th days of the same month. 43 women of STA 14 reappear there again, but now they are called libir ("old"), and another group of 47 women (first 41 in NY 120 and then 6 more in STA 16) was added. In the twelfth month of the same year STA 15 records 61 women, but only 18 names are common to all four texts, and only seven of them belong to women that can be positively identified as the same persons. Altogether no more than eleven women were present from the second to the twelfth month in this team. Distribution of barley to these women is shown on Table V.

It is sufficient to compare this situation with pre-Sargonic Lagash where the same names appear again and again, year after year, to understand that something is different here. In fact, the absence of men and children from the set discussed cannot constitute evidence that these women were unmarried and childless. We know for certain that in some cases children could be ignored in such lists. For example, HSS IV 17 records the same women under the same supervisors as MVN V 266, but they appear in the first text without children, and with them in the second. Above all our set comes from Umma, and

Table V

text No	STA 14	NY 120	STA 16	STA 15
day	2	11	13	
month	2	2	2	12
ama-kal-la ŠE	30 silà	30 silà	0	10 silà
a-gub-ba BI	20 silà	0	0	10 silà
nin-ezen TUG	30 silà	[7]	30 silà	20½ silà
nin-ezen GU ₄	0	0	0	55 silà
nin-me-lam INANNA	30 silà	30 silà	0	4 silà 10 gín
na-an-na MU	30 silà	30 silà	20 silà	5 silà
sag-nin-kalam-ma šu-i	30 silà	30 silà	20 silà	13 2/3 silà
nin-é-gal-e BA	-	0	20 silà	10 silà
gemé ^d -nin-ur ₄ -ra AR	-	30 silà	20 silà	10 silà
nin-ḥé-gál ZA	-	0	20 silà	10 silà
gemé ^d -nin-ur ₄ -ra DAB ₅	30 silà	-	-	10 silà

in this town only captive women (nam-ra-ak, RA XXIV p. 45, YOS IV 67, TCL V 6039, Nik. II 329, YBC 128,3666) were recorded with children, but all indigenous women are listed without them.

Nor does the absence of men necessarily mean that the women listed were unmarried. Men and women are listed together only in long lists including several work-teams, which are in any case separate according to the sex of the workers. Sometimes separate lists of men and women are related to the same "household" or even the same supervisor. For example, women from Ur are recorded in three separate lists (UET IX 45, 63, 65) under three supervisors (nu-banda): Pišahil, Tūram-ilī, and Lú-gina, but in UET III 1449, the three nu-banda appear as the supervisors of male weavers (guruš-uš-bar). Moreover, two women in STA 16 are described as wives (dam) of certain men: Nin-ab-ba-na dam Lugal-gi^šgigir (II 18)³⁵ and Ama-kal-la dam Lugal-má-gur₈-ri (IV 19).

In general, family relations are mentioned extremely rarely in Sumerian economic texts. In his study of Sumerian kinship terms Gelb³⁶ mentions only one text for the entire Ur III period (TCL V 5666). Three more texts may be added now: ASJ III 169, MVN VI 423, BM 14626 (unpublished)³⁷. The most interesting are MVN VI 423 and ASJ III 169. The first is a list of 9 guruš (three of them dead), 11 gemé (one dead) and two dead sucklings (dumu-ga). All women are described only through the names of their husbands as dam PN (wife of PN). Six of these names appear also in the list of guruš. ASJ III 169 (still in its unopened envelope) is a ration-list of personnel of the temple of Nin-mar. As recipients of barley are listed 16 erín-TUR-[TUR] and 19 dam-erín³⁸. Since erín seems to be one of the fractions of "guruš class"³⁹, both texts confirm that guruš could be married, and according to MVN VI 423 their wives were called gemé.

We have to keep in mind that Sumerian economic texts were not written for the purpose of sociological research, but for very practical reason of registration of actual work-teams where men and women were always separated according to the division of labour common to most primitive societies. Therefore, family relations of male and female workers were in most cases irrelevant to the scribes. They are mentioned only in some extraordinary situations, such as presents for wives of certain people (DP 132, 133, 173, 226 = An. Or. II p. 40-49) or transfer of entire families from one place to another (Nik. I 19).

The conclusion that women listed separately could be married can be confirmed also by the earlier (pre-Sargonic or Sargonic ?) material from Ebla and later material (Old Babylonian) from Chagar-Bazar. In Ebla women listed in work-teams were called not gemé but dam (TM 75.G.273, the expression dam-kikkén in this text being parallel to gemé-kikkén in Ur III material). Despite such designation (wives), the women are listed without men and without children⁴⁰. In Chagar-Bazar women with children listed in four parallel texts (A 974, 982, 987, 993) are called in the colophon aššat wardī šarrim mārū-šū-nu ù mārātū-šū-nu - "wives of the servants of the king, their sons and daughters"⁴¹.

Several conclusions can be drawn from the texts discussed above:

1. The most plausible explanation of the high replacement rate of workers in short terms is that a great part of men and women of the "guruš class" were conscripted for corvée work on behalf of different state-managed "households" for limited period of time. Only a relatively small portion of them constituted permanent personnel of these "households", like gemé in pre-Sargonic Lagash.
2. Men and women worked in separate work-teams according to the primitive division of labour, but most likely they were married to each other.
3. Children were normally present in work-teams with their mothers, according to the same system of division of labour. For this reason, when listed separately, they usually bear matronymics or are described by the occupations of their mothers.

The presence of captive women with children (nam-ra-ak) in our texts does not contradict this picture. As was shown by Gelb in his study of prisoners of war in ancient Mesopotamia⁴², immediately after the capture prisoners of war were kept in concentration camps (karaš, written KI.GURUŠ.UG₆ - "place where men die") where many of them starved to death (group of texts from Umma TCL V 6039, Nik. II 329, YBC 128, 3666)⁴³. However, the survivors were normally released and assigned to land as colonists, subject to corvée work like indigenous population, or were distributed to the temples as a-ru-a "votive offerings" (RA XXIV p. 45, YOS IV 67)⁴⁴. In general, Gelb concludes: "Is it possible to turn POWs into slaves? The answer is theoretically, yes, practically, no!"⁴⁵.

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If now we return to Linear B material, several important correspondences between Sumerian and Mycenaean terminology can be established:

1. All three groups of women in Sumerian texts - indigenous women, a-ru-a votive offerings in the temples and nam-ra-ak prisoners of war, - are found in the Mycenaean material as well.

Women are described by female derivatives of local place-names

more commonly at Knossos (a-mi-ni-si-ja, da-te-wi-ja, da-wi-ja, do-ti-ja, ko-no-si-ja, o-du-ru-wi-ja, pa-i-ti-ja, qa-mi-ja, se-to-i-ja, tu-ni-ja), but also at Pylos (e-wi-ri-pi-ja, a-te-re-wi-ja, ra-u-ra-ti-jo).

The Mycenaean equivalent to Sumerian a-ru-a seems to be po-re-na. This word is attested only twice in PY Th 316 and TH Of 26. The Pylian text records a donation of several gold vessels together with two men and eight women to different shrines. The nearest parallel to this text is Hittite KBo XVI 65⁴⁶, but the Sumerian a-ru-a texts BM 16376 and 17741 published by Gelb⁴⁷ are quite similar. In the Theban text this word (written there po-re-si in the dative plural) describes women as recipients of wool, like other women employed in textile industry.

It is less certain whether a Mycenaean equivalent of Sumerian nam-ra-ak captives exists. Several groups of women at Pylos are described as ki-ni-di-ja, ra-mi-ni-ja and mi-ra-ti-ja, and one group as ra-wi-ja-ja. It is possible that the first three words are derived from well known place-names in the Eastern Aegean: Knidos, Lemnos and Miletos, and the last one is a Mycenaean form of Greek λαῖα (Doric λαῖα) - "booty". However, this word with equal probability may be a feminine occupational term derived from Greek λήϊον (Doric λαῖον) - "cornfield"⁴⁸. As for the place-names (if they are place-names and not unknown occupational terms), other possibilities than references to captive women are not out of question. They may be ethnics of peaceful settlers from Asia Minor, or, alternatively, references to otherwise unknown local place-names inside the Pylian kingdom like ko-ri-to (Ad 921), which is not the famous Greek city Korinthos but some village of the same name in Messenia.⁴⁹

2. Supervisors of work-teams represented by ideograms DA and TA at Pylos and Knossos are unnamed, and their rations are included in the rations for the whole team. The same position in Sumerian texts

is occupied by female supervisors - zilulu (PA.ULU₃), but male supervisors - ugula (PA), are always named and are not counted in the calculations of rations. Only at Thebes are DA supervisors named: once by a male name (ko-tu-ro₂, Of 34), and once by a female (ne-a₂-ri-da, Of 39). The position of the men whose names are used as feminine adjectives (at Pylos and Thebes), or in the genitive (at Knossos) for description of women, is uncertain. They could be supervisors of high rank, like Sumerian nu-bandà for instance, or "owners" of women, i. e. persons on whom women were dependent in some way.

3. Division of children by age and sex, and women by age, though present in both Mycenaean and Sumerian texts, differs in details. Sumerian women are more regularly specified as young (ā-t) and old (šū-gi₄). Such division is not found at Pylos at all, but at Knossos and Thebes ne-wa (young) and pa-ra-ja (old) are occasionally distinguished⁵⁰. Children, on the contrary, are regularly divided at Knossos into four groups, according to age and sex: ko-wo/ko-wa me-zo-e/me-wi-jo-e (boys/girls big/small). In Sumerian texts, they are normally divided only according to the quantity of rations (20, 15, 10 silà), and occasionally, boys and girls (dumu-nita/mi) or sucklings (dumu-gaba/ga) are specified. The overall ratio of children to women at Pylos is about 1:1, which is higher than in Sumerian ration-lists (0.5:1), but lower than in "family texts" (2:1)⁵¹.
4. The distinction between libir ("old") and dah (additional) women in Sumerian texts probably corresponds to the pe and za abbreviations at Knossos, if they mean "previous year" (pe-ru-si-nu-wa), and "this year" (za-we-te).—

These parallels can be summarised in the form of a short Mycenaean-Sumerian "glossary":

VIR	guruš
MUL	gemé
ko-wo	dumu-nita

ko-wa	dumu-mí
ko-wo me-wi-jo	dumu-nita-gaba
ko-wa me-wi-ja	dumu-mí-gaba
ne-(wa)	gemé-á-½
pa-(ra-ja)	gemé-šú-gi ₄
pe-(ru-si-nu-wa)	libir
za-(we-te)	daḥ
po-re-na	a-ru-a
ra-wi-ja-ja (?)	nam-ra-ak
DA (?)	zilulu (PA.ULU ₃)
TA	ugula (PA)

Despite all these similarities, we cannot simply transfer the social position of Sumerian gemé to Mycenaean Greece; any such conclusion must be based on internal evidence. Nevertheless, our conclusion that women recorded in the same way as in Linear B documents were not slaves, has great significance. The formal structure of the texts cannot now be used as decisive evidence for the existence of large gangs of female slaves at Pylos and Knossos. Though Tritsch's theory must be rejected for different reasons, his arguments against the servile status of Pylian women require reconsideration.

First of all, women recorded in the Pylian Aa, Ab series are too numerous - about 700 (plus almost the same number of children), 550 of them at Pylos itself. The Pylian palace could hardly employ such a great number of slaves. For comparison, the temple of Ba-Ú in pre-Sargonic Lagash employed permanently from 141 to 228 women during the reign of Uru-inim-gina⁵².

The Pylian text Aa 779: me-ta-pa MUL 3 ko-wo 1 TA 1, (lat. inf.) a-te-re-wi-ja, is unintelligible unless we assume that women from Aterewija in the Farther province carried on their corvée service in Metapa in Hither province. Also it is hardly possible that the situation at Knossos differed so drastically from that at Pylos, as was assumed by Chadwick⁵³, only because feminine derivatives of local

place-names are less frequent at Pylos than at Knossos: the texts from both archives are too similar to be records of local conscripts in one case, and of slave gangs in the other. Masculine ethnics derived from place-names are also more common in lists of men from Knossos, while at Pylos the ablatives are more commonly used in their stead⁵⁴.

From a marginal comment in Ad 684: a-pu-ne-we e-re-ta-o ko-wo - "sons of rowers from A", we can understand that fathers of boys recorded in the Ad set were known, but only in this specific case information about them was important for the scribe for some unknown reason. In fact, the Pylian "women series" are closely connected by cross-references to the "rowers set" An 1, 610. Three groups of rowers are described as a-po-ne-we (An 1: VIR 7, An 610: VIR 37), e-wi-ri-po (An 610: VIR 9) and da-mi-ni-jo (An 610: VIR 40). The first word is a phonetic variant of a-pu-ne-we in Ad 684, discussed above. e-wi-ri-po appears in the form of the feminine adjective e-wi-ri-pi-ja in Aa 60 as a description of 16 women with 11 boys and 7 girls. The feminine form of the third word - da-mi-ni-ja - appears in Aa 96 and Ad 697 in the most interesting context: (Ad 697) da-mi-ni-ja ri-ne-ja-o ko-wo e-re-[ta] ge-ro-me-no VIR - "sons of D female flax-workers, (they) became rowers, men - "⁵⁵. Whatever all three words discussed above mean (most probably they are place-names), they indicate that men described by them belong to the same group of population as women, and most likely they were their husbands and sons. The absence of a numeral in the last example has particular significance - it confirms that other boys recorded in the Ad set indeed worked in teams with their mothers, but one group of boys, in Ad 697, was exceptionally conscripted as rowers with their fathers, and from the point of view of the scribe responsible for Ad set (No 23), they were absent from the team of flax-workers.

Two groups of women - ki-ri-te-wi-ja at Knossos and ti-nwa-si-ja at Pylos, have especially interesting cross-references. The first of them is mentioned in the ration-list KN E 777 together with a-ze-ti-ri-ja, the Knossian variant of a-ke-ti-ri-ja, one of the most frequent

occupational terms both at Pylos and at Knossos. Three groups of ki-ri-te-wi-ja-i (dat. pl.) from Knossos, Amnissos and Phaistos are recorded in this text as recipients of 100 large measures of grain each (an amount sufficient for 500 women, if calculated without children) for one month. At Pylos ki-ri-te-wi-ja women appear in two parallel texts Eb 321 and Ep 704 as collective holders of land: ki-ri-te-wi-ja o-na-to e-ko-si ke-ke-me-na ko-to-na pa-ro da-mo to-so pe-mo GRA 1T9 - "K-women have (pl.) plot of kekemena ko to na (kind of land) at/from the 'people', so much seed, 1.9 large measures".

9 ti-nwa-si-ja women are recorded at Pylos in two parallel texts Aa 699 and Ab 190, and seven of their sons - in Ad 684, where this word appears in a slightly different variant ti-nwa-ti-ja-o (gen. pl. f.). In the last text, these women are also specified as i-te-ja - "female web-weavers" (from Greek ἰστός - web-beam). We find their male counterparts described as a-ta-o ti-nwa-si-jo ("T-men of Ata") in the ration-list Fn 324, where they receive 1T2V (8 small measures) of barley. Since 2V seems to be a ration for one man in this text⁵⁶, we have a group of four men here. These men are found again in Ea 810: ti-nwa-si-jo GRA 3T5. The Ea set is a land-register like Eb and Ep, but Ea 810 is unusual for this type of record: it does not use the verb e-ke ("has" or "holds"), neither the kind of land nor the type of holding is indicated, and the size of 3.5 GRA is too large for an individual holding. It is possible that we have here a record of a collective holding, as in the case of ki-ri-te-wi-ja women. The meaning of both words is disputed⁵⁷, but what is important is that women recorded in our "women series" or their male counterparts could be found as land-holders.

Some other features of the "women series" can be counted against the servile status of the women in question. If men whose names are used as descriptions of women were slave-owners, it is hardly possible to understand why their private slaves were recorded at all in royal archives, as workers in palatial "household". Registration of absent women and children is more likely to be found in connection with corvée

work-system than with slavery.

To summarise our discussion of Mycenaean and Sumerian women with children at work, we can conclude that in both cases our sources most probably reflect primitive division of labour by age and sex. Neither records of separate work-teams of women with children nor separate lists of children with matronyms can be used as evidence that they were slaves. Their social position has to be clarified by other evidence, and most of them speak in favor of corvée system rather than slavery.

2. Lists of men (classification)

The lists of male personnel marked by the ideogram VIR are classified as Ac, Ae, An, Aq at Pylos, Am, As, B at Knossos, Au at Mycenae, and Al at Tiryns. Many texts without ideograms (class V) are in fact also lists of personnel. Unlike the lists of women these texts show a great variety of patterns and any intellegible discussion of them must be preceded by some classification of the material.

Such a classification can be arranged in two different ways: 1) according to the formal structure of the texts, and 2) according to the purpose of the texts. These two principles of classification are at the same time two stages of research, since its second part cannot be executed before the first.

From the formal point of view all lists of personnel are divided into three large groups: 1) lists of names, 2) lists of unnamed persons, and 3) mixed lists of named and unnamed persons.

I Lists of names.

Texts of this kind are subdivided according to their formula into the following groups:

1. Simple lists of names.

a) Lists of names without heading. They are particularly numerous at Knossos: As 566, 603, 607, 645, B 801, 802, 803, 805, V 147, 466, 479, 482, 488, 492, 503, 652, 831, 832, 961. Three such lists are found at Mycenae: Au 609, 653, 660, and only one at Pylos: An 192.

All the texts from Knossos and Mycenae are fragments of different size and they are probably included in one category artificially, only because their headings are broken. As for the single Pylian text, it is recognised as a list of some officials by its prosopography: almost all the names which are listed there are found in many other texts with different indications of their elevated position in the society⁵⁸.

b) Lists of names with headings: KN As 1516 (three subsections with their own headings each: (1) ko-no-si-ja ra-wa-ke-ja, (2) []-ti-jo a-nu-to qa-si-re-wi-ja, (3) se-to-i-ja su-ke-re-o qa-si-re-wi-ja), As 1517 Obv. 1-10 ([]-no re-go-me-no), B 799 (da-i-pi-ta ke-do-si-ja), B 804 ([]-ke-re ke-do-si-ja), B 8206 ([ke]-do-si-ja); MY Au 657 (i-jo-te); PY An 209(ko-ri-si-jo ta-te-re), Vn 865 (na-u-do-mo).

All these texts are probably records of work-teams. Their headings refer either to the type of the team (ra-wa-ke-ja, qa-si-re-wi-ja, ke-do-si-ja)⁵⁹ or to the type of workers (na-u-do-mo - "ship-builders"⁶⁰, ta-te-re - "worker of $\sigma\tau\alpha\theta\mu\acute{o}\iota$ "⁶¹), or it indicates whether the workers are already assigned to work (i-jo-te - "going", re-go-me-no - "remaining"⁶²).

Most of the fragments from Knossos which were classified as I.1.a) probably belong to this category.

c) Lists of names without heading but with totals used as colophons (?). KN As 1519 (11. [ma]-ri-ne-wo wo-i-ko-de (12) to-so VIR 10), As 1520 (to-so VIR 10), B 800 ([]-pa-no VIR 30), B 806 (ko-[]-ka-ra-te-ne

VIR 20);

MY Au 102 (a-to-po-qo), Au 658 (to-so VIR 20 si-to GRA 4).

The beginning of all the texts from Knossos is broken and if they had heading they actually belong to the group I.1.b). In this case the "colophons" provide only some additional information, such as the location of the work-team (As 1519: "to the house of Marineu")⁶³ and the totals (in all four texts).

The prosopography of the Mycenaean Au series shows that the texts Au 653, 657, 658, 660 record the same work-team as Au 102 and therefore all the men listed there are probably "bakers" (a-to-po-qo)⁶⁴.

2. Lists of names specified by place-names.

KN As 40, 604, V 655;

PY An 5, 172.

Texts KN As 604 and V 655 have a heading e-re-dwo-e of unknown meaning. The beginning of As 40 is broken but it has a total (to-so VIR 10 - "so many men - ten"). The heading of PY An 172 is only partly preserved: [] ra-pte wo-wi-ja-ta (the tailor from W"). The first word was probably the name of the man in charge of the whole group.

In PY An 5 and 172 the place-names are in the ablative-instrumental indicated by the plural ending -pi (mu-ta-pi, i-na-pi, a-we-u-pi), which means that these texts deal with summoning of the workers from several villages. In the Knossian texts however the place-names are in the nominative which does not help to understand their purpose.

3. Lists of pairs of names.

They are further subdivided into the following groups:

a) PN₁ PN₂-qe VIR 2 TELA¹ 1.

KN As 602, 605.

b) GN po-ti-ro PN₁ 1 PN₂-qe 1.

KN V 756, 1002, 1003, 1004, 1005, 1043, 1583, 7670, 7964.

c) o-pi PN₁(dat.) PN₂(gen.) i-jo PN₃(nom.) 1.
KN V 1523.

d) pa-ro PN₁(dat.) PN₂(nom).
PY An 340.

The texts of group (a) are probably connected with the textile industry⁶⁵ since they record one cloth (TELA¹) in some connection with two men: "PN₁ and PN₂ - two men, one cloth". These texts have their "female" correspondent in KN Ap 5748 which records three women with one cloth: "PN₁ PN₂ PN₃ MUL 3 TELA¹+TE 1".

The purpose of the texts from group (b) cannot be determined since the meaning of the key-word po-ti-ro remains obscure⁶⁶, but the presence of the indication of place in each text connects them with group I.2.

The texts of groups (c) and (d) are records of work-teams since they have a hierarchical structure. The preposition o-pi with the dative in KN V 1523 probably means "at (the disposition of)"⁶⁷ and the preposition pa-ro with the dative too has a very similar meaning in PY An 340⁶⁸. The only difference between these two texts is that in the Knossian one all the workers are specified by the patronymics: pi-ma-na-ro i-jo - "son of Pimanaro".

II Lists of unnamed persons.

1. Lists of ethnics or place-names.

KN Am 568, 597, 600, 601, 819, B 807, 810, 813, 827;
PY Ac series, An 1, 18, 35, 37, 852.

All the texts from Knossos are lists of ethnics, i. e. the masculine adjectives in -jo derived from geographical names. Among them the Am tablets constitute the homogeneous set characterised by the addition of the phrase: "e-te e-so-to a-mo-ra-ma" (Am 568, 600,

601) of unknown meaning, or the rations of barley for one month (Am 597, 819). The only thing that can be said about the obscure word a-mo-ra-ma is that it probably explains the absence of the rations⁶⁹. KN B 810, 813, and 827 record present (ta-pa-e-o-te) and absent (a-pe-o-te) workers from different places.

Nine Pylian tablets of Ac series have a similar structure. Each of them consists of the geographical name (all of them are well-known "towns" of the two Pylian provinces), the ideogram VIR, a numeral, the word o-pe-ro ("deficit") followed again by the ideogram and numeral. Since the tablets of this group were found outside the main archive in the so-called "bureau 99" which was used as a leather work-shop⁷⁰, it can be concluded that these are the records of present and absent workers summoned to this work-shop from the different "towns" of the Pylian kingdom.

PY An 1 is a list of five place-names in the ablative-instrumental (po-ra-pi) followed by the ideogram and numeral under the heading: e-re-ta pe-re-u-ro-na-de i-jo-te - "rowers are going to Pleuron", which probably means that these rowers were conscripted from various places for service at Pleuron.

In An 18 the place-names are in the dative-locative (re-si-we-i, pa-ki-ja-si) and the text is subdivided into four sections: the first section records the workers "released" from service (e-re-u-te-ri-[jo] - ἐλευθερίοι), the second - "the absent builders" (to-ko-do-mo a-pe-o), the third and the fourth - the workers actually present. In the first two sections one worker is recorded against each place-name, while in the last two - 90 ox-herds at Tino and 245 unknown workers (maybe te-[ko-to-ne] - "carpenters") at Pakijana are listed. The same place-names under the heading]go-u-ko-ro[(ox-herds) are listed in the fragmentary An 852. In An 35 place-names in the allative (me-te-to-de, sa-ma-ra-de) are listed under the heading to-ko-do-mo de-me-o-te - "the builders who have to build". The heading of An 37 as well as the endings of the place-names listed there are too broken to decide

what was the purpose of this text.

It seems clear however that the purpose of most of the texts in this group was the registration of the presence and absence of the workers conscripted for service from one place to another.

2. Lists of occupations.

KN As 5941, B 101, 755, 779, 7036;

PY Ae 574, 765, 995, An 1282.

As 5941 is a list of rowers (e-re-ta) like PY An 1, but the text is very fragmentary. B 779 and 7036 mention the te-re-ta⁷¹ and ga-si-re-we whose position in society seems to be relatively high.

An 1282 seems to be a record of the wheel-making work-shop, if we may judge from the term a-mo-si (dat. pl. "wheel-makers")⁷². The meaning of the other words mentioned there is unknown⁷³, but it is clear that the workers were organised in five teams of eighteen men each.

All other texts of this group are very small tablets which mention one or two occupational terms each, most of them of unknown meaning⁷⁴.

3. Lists of place-names and occupations.

KN Am 826, B 808, 815, 816, 985, 5752, 7035, 7043, 8006, V 56,

159, 865;

PY An 207, 298, 424, 427.

In Am 826 and V 159 te-re-ta are mentioned again as in the previous group, but now they are found in rather unexpected company with "carpenters" (te-ko-to-ne), "planters" (pu₂-te-re), and tailors (ra-pte-re) and they are specified by place-names.

V 865 is a list of local officials with the titles ko-re-te, a-ke-re-mo-no and po-ro-ko-re-te at the two well-known places: Rukito and Qara. ko-re-te and po-ro-ko-re-te are well attested Mycenaean titles⁷⁵, they are always attached to a place-name and their respective meaning is probably "local mayor" and his deputy. a-ke-re-mo-no⁷⁶ on the other hand is a local Cretan title, it is not attested outside Knossos and according to our text its holder was in a position somewhere between ko-re-te and his deputy.

All eight Knossian B tablets constitute a single set which records teams of po-ku-ta⁷⁷ (in full writing in B 815, 816, 985, 7035, 8006, and in abbreviated form po in B 808, 5752, 7043) from different places.

The team of po-ku-ta appears also in Pylian An 207 among such professions as potters (ke-ra-me-we), gold-smiths (ku-ru-so-wo-ko), arrow-smiths (to-ko-so-wo-ko), and tailors (ra-pte-re) from at least nine places. The texts An 298, 424, 427 have a similar structure. In all of them the place-names appear in the dative singular, which can mean either the present location of the workers or refer to conscription from these places, since the ablative and locative singular are not distinguished in the Mycenaean dialect.

4. Totals (at Knossos only).

KN B 817, 7034, 7047.

These three small fragments are characterised by the exceptionally high numbers (900 and 130 men) or by the word ku-su-to-ro-qa (σουστροφή) which was used in Linear B for the indication of the grand total.

III Mixed lists of named and unnamed persons.

1. Three levels of hierarchy.

a) "o-ka tablets": PY An 519, 614, 654, 656, 657, 661.

This is the largest single set of documents among the Linear B lists of personnel. It is called after the name of the teams (o-ka) which are recorded there. The meaning of this word is unknown⁷⁸. The fragmentary An 614 is a record of the absent members of the o-ka personnel and each one of the other five tablets records two such teams. The hierarchy of each o-ka includes three levels: 1) the head of the whole team: personal name in the genitive before the word o-ka ("the o-ka of PN"), 2) list of names (from three to eight), 3) list of unnamed persons specified by the five unintelligible words⁷⁹ (from 10 to 110).

b) "ke-ro-si-ja tablets": PY An 261, 616.

Like the previous set this one is called after the name of the teams⁸⁰ which also have a similar structure: 1) the heads of the teams (four in number), 2) named members of ke-ro-si-ja (eighteen men) and, 3) unnamed personnel without any specification; they appear only through the totals (51 according to An 261, or 50 according to An 616). The reverse of An 261 and the obverse of An 616 are duplicates and they record the totals for each ke-ro-si-ja.

c) "za-mi-jo texts": KN As 1517 Obv. 11-13, Rev. 1-3; PY An 129.1-4.

These two sections of the two texts from Knossos and Pylos deal with the team of workers called in both cases za-mi-jo⁸¹. Their hierarchy is also similar: 1) the head of the team, introduced by the preposition o-pi at Knossos and pa-ro at Pylos (both with the dative), 2) two (An 129) or three (As 1517) personal names, 3) unnamed za-mi-jo (ten in An 129, and nine in As 1517).

The texts of groups (a) and (b) are apparently similar to those of group I.1.b), especially those of them which use the name of the work-team as a heading: ra-wa-ke-ja, qa-si-ri-wi-ja (As 1516), ke-do-si-ja (B 799, 804, 8206).

The texts of group (c), on the other hand, have their correspondences in the pair of texts classified as I.3.c) (KN V 1523) and I.3.d) (PY An 340). Both Pylian texts (An 129 and 340) use the preposition pa-ro, and both Knossian ones (As 1517 and V 1523) - the preposition o-pi in a very similar context.

The purpose of all these texts was probably the same - the control over the supervision of work-teams of different types.

2. Two levels of hierarchy.

KN B 798, 1055;

PY An 7, 39, 594, 610, 724.

In the texts KN B 798, PY An 7, 39, and 594 several groups of men specified by their occupations are listed together with a few personal names. In An 39 these names appear after the groups of unnamed persons, and in the rest of the texts the names precede them. In An 7 the rations of olives are added and this text is closely connected with the ration list Fn 1427 which records the distribution of barley to the same groups of men. An 39 and 594 are also connected with the ration list Fn 50.

The named persons in these texts are probably the heads of the groups, but since the unnamed workers are specified by different occupations they cannot constitute a work-team. Most probably all these texts represent lists of personnel of various "households" or "establishments", somewhat similar to a record of the work-shop An 1282 (class II.2).

KN B 1055 is written according to the principle of the ke-ro-si-ja tablets: unnamed persons appear only in the total after the list of names, under the heading ko-no-si-jo e-ge-ta - "followers from Knossos" which refer probably only to the named personnel⁸².

Finally, PY An 610 and 724 together with An 1 (class II.1) constitute a set of so-called "rowers' tablets". An 610 records the rowers (e-re-ta) present, and An 724 - the absent ones, those who failed to assemble at Roowa. In An 610 the rowers are specified by social terms (ki-ti-ta, me-ta-ki-ti-ta, po-ku-ta), place of origin, or the names of officials in the genitive (Wedanewo, Ekera₂wono). In An 724 the rowers are listed against names (Ekera₂wone, Tatikoweu), or titles (me-nu-wa, ra-wa-ke-ta, ki-e-u).

3. Lists of men (discussion).

If we try to reclassify the lists of personnel according to their purpose, it will now be relatively easy to demonstrate that almost all of them belong to three broad categories⁸³: 1) records of work-teams, 2) quotas of conscripts, and 3) lists of personnel of "households".

a. Records of work-teams.

KN As 602, 605, 1516, 1517, 5941, B 101, 755, 799, 804, 1055,
8206, V 1523;
MY Au 102, 653, 657, 658, 660;
PY Ae 524, 765, 995, An 129, 209, 261, 340, 519, 614, 616,
654, 656, 657, 661, Vn 865.

Many fragmentary lists of names of uncertain character probably belong to this category as well:_____

KN As 566, 603, 607, 645, 1520, B 800, 801, 802, 803, 806,
V 147, 466, 479, 482, 492, 503, 652, 831, 832, 961;
MY Au 609.

Five types of work-teams are attested: ra-wa-ke-ja (probably should be read ra-wa-ke-(si)-ja), qa-si-re-wi-ja, ke-do-si-ja, ke-

ro-si-ja and o-ka. The teams of the last type deserve special attention.

Since Leonard Palmer proclaimed in 1956 the so-called o-ka tablets as "perhaps the most important historical document yet discovered in Linear B script"⁸⁴, probably no other single set of Linear B documents has drawn more attention than these six tablets from Pylos (An 519, 614, 654, 656, 657, 661). The circumstances of the destruction of the Pylian kingdom⁸⁵, its military organisation⁸⁶, taxation system⁸⁷ and geography⁸⁸, and the sources of the Homeric "Catalogue of Ships"⁸⁹ are some but by no means all of the topics that have been discussed in connection with this group of texts. The military character of this set seems now to be generally accepted, on the grounds of the translation of the main heading, and of the analysis of the formal structure of the texts. Let us examine carefully each of these considerations.

The heading of the whole set, which is found on An 657, reads:

o-u-ru-to o-pi-a₂-ra e-pi-ko-wo

In this phrase the first syllable o- only can be safely interpreted as the introductory particle o-/jo-, which frequently opens the headings of separate tablets or whole sets of texts⁹⁰, but all the rest raises serious difficulties of interpretation. e-pi-ko-wo is found on KN As 4493, and a closely related form (maybe even a variant) o-pi-ko-wo on PY Jn 881. Both texts are small fragments and contribute little to the understanding of the word. As 4493 will be discussed later in connection with a word e-ge-ta, which is also found both on that tablet and in the o-ka set. Meanwhile, it is relevant to point out that the occurrence of both words in As 4493 connects it with the o-ka set, while the occupational term e-ro-pa-ke-u connects it with the "textile" tablets KN Lc 534 and Ld 595 where the corresponding feminine form e-ro-pa-ke-ja is found⁹¹. The Pylian tablets Jn 881 and Jn 829 comprise a small "set"

of two, introduced by the heading of Jn 829 and dealing with delivery of bronze by different officials⁹². In Jn 829 ko-re-te and po-ro-ko-re-te are listed, while in what remains of Jn 881 o-pi-ko-wo and o-pi-su-ko are found⁹³. If o-pi-su-ko means "those in charge of figs", and since ko-wo in Linear B normally represents the Greek word for boy (κόρφο), o-pi-ko-wo probably means "those in charge of boys", hence "foremen". e-pi-ko-wo may easily be the phonetic variant of this word⁹⁴, but its traditional interpretation as ἐπίκοφοι (from κοφέω, to hear) - "overseers"⁹⁵ - is of course equally possible, and the difference in meaning between the two interpretations is minimal.

-u-ru-to and o-pi-a₂-ra are hapaxes, and therefore, even if their etymology could be firmly established, their meaning in the Mycenaean dialect cannot be fully understood without safe contextual support. The root *a₂r- is found in the words a₂-ri-e (An 724) and a₂-ri-sa (Eq 213), and in several geographical and personal names (a₂-ru-wo-te, a-pi-a₂-ro, a₃-ki-a₂-ri-jo/ia). a₂-ri-e is probably a designation of men listed as "absent rowers" (e-re-ta a-pe-o-te), and a₂-ri-sa is a description of fields (a-ro-u-ra a₂-ri-sa). o-pi-a₂-ra seems to be related to these words in the same way as o-pi-da-mi-jo (An 830, Cn 608) is to da-mo ("people"), in which case it would mean "the territory where a₂-ri-sa fields are located and which a₂-ri-e people inhabit"; or it can be understood as a collective term for the inhabitants of such a territory. Some connection with the sea (ἄλς) is possible, considering that a₂-ri-e are rowers, but by no means obligatory⁹⁶.

-u-ru-to is probably a verbal form (3 pl. pres. med. ?) and the same root seems to be found in the word e-pi-u-ru-te-we on Ub 1318⁹⁷, where it indicates the "destination of two deer-skins (e-ra-pe-ja e-pi-u-ru-te-we E 2). Ub 1318 is a record of a leather workshop where different animal skins (di-pte-ra, wi-ri-no, e-ra-pe-ja) are listed against their "destinations" which stand in the dative or in the nominative: though, besides the undoubted datives⁹⁸ and

nominatives⁹⁹, several words can be interpreted in either way¹⁰⁰. e-pi-u-ru-te-we falls into this last category; but since both personal names and names of "objects" are found in all three categories, we cannot even decide whether it is an occupational term or the name of a leather object. Two Greek roots $\epsilon\pi\upsilon$ - "to protect" and "to draw" - have been proposed as possible etymologies for both words¹⁰¹, but neither derivation can be decisively proved, or help us to make sense of these words in a given context.

It seems that at the present stage of understanding of Mycenaean Greek no unambiguous translation of this sentence is possible, and any far-reaching conclusions are hardly justified when they are based on such a loose foundation. Even if we accept the traditional translation, "supervisors protect (in what sense?) the coastal regions", this contains nothing "military" and is open to different interpretations.

It is not difficult to understand however why most scholars have urged a "military" interpretation of this phrase, for the hierarchical structure of the teams after which the whole set is named (o-ka), and the decimal round numbers of their personnel, certainly give the impression of military units¹⁰².

However, despite many efforts the precise structure of these units has never been fully elucidated. Each tablet records the personnel of two teams introduced by subheadings, which consist of a personal name in the genitive, the word o-ka, and, in five cases at least, a place-name which indicates the location of the team. Since An 614 is a small fragment and seems to be a record of the absent members of o-ka personnel (a-pe-e-si), we have ten such teams. Each o-ka is sub-divided by a blank space into several paragraphs which, theoretically, may consist of three elements:

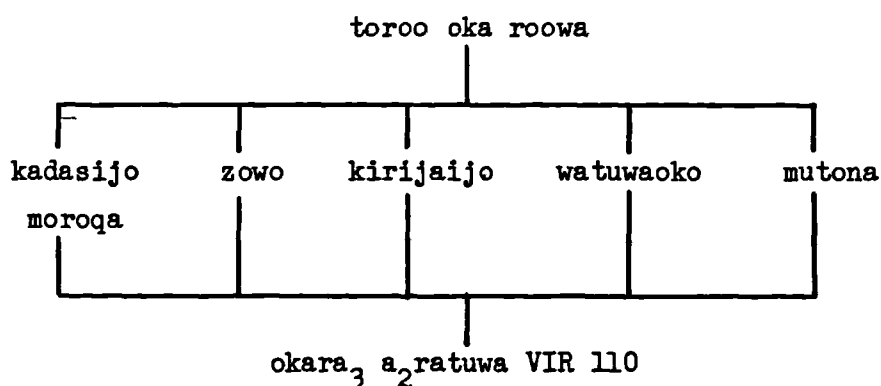
- 1) a list of personal names (conventionally called "officers"), including one with the title mo-ro-qa¹⁰³ (An 519.2);
- 2) a list of unnamed persons ("soldiers") represented by the ideogram VIR and numbered from 10 to 110 (though in one case, An 656.4,

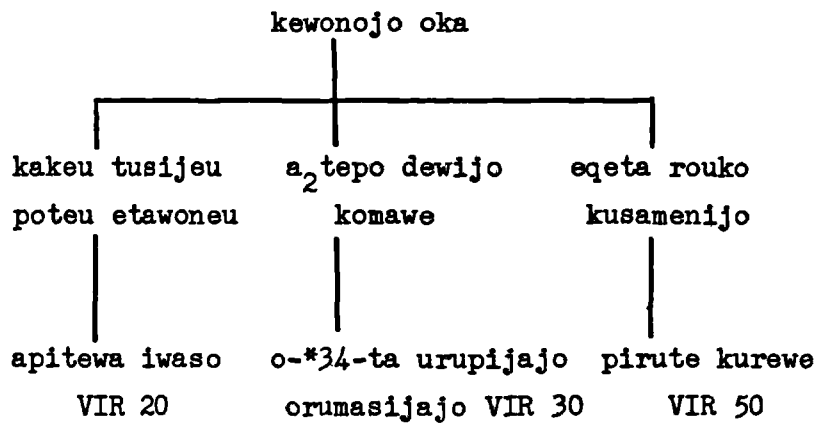
without number). They are invariably called by one of the six following words: i-wa-so, ke-ki-de, ko-ro-ku-ra-i-jo, ku-re-we, o-ka-ra₃ (or o-ka-ra, on An 657.13), and u-ru-pi-ja-jo, which are frequently specified by ethnics and/or an additional place-name in the locative (a₂-ru-wo-te, a₃-ta-re-u-si, po-ra-i, u-wa-si) or allative (ne-do-wo-ta-de, wa-wo-u-de). Five such groups are called pe-di-je-we (An 654.14, "plainsmen"), two groups are designated o-*34-ta¹⁰⁴ (An 519.11, 654.3), one group is said to be ne-wo (An 656.15, "young"), and in one case the word sa-pi-da stands instead of the ideogram and numeral (An 656.4);

- 3) the phrase me-ta-qe pe-i e-qe-ta PN (μετά-τέ σφειζ ἐπέταξ PN) - "and with/among them the follower PN". All "followers" but one (An 661.13) are named, and their names are frequently specified by patronymics and ethnics. One e-qe-ta appears to be called by an ethnic only, pe-re-u-ro-ni-jo (An 656.16, "from Pleuron").

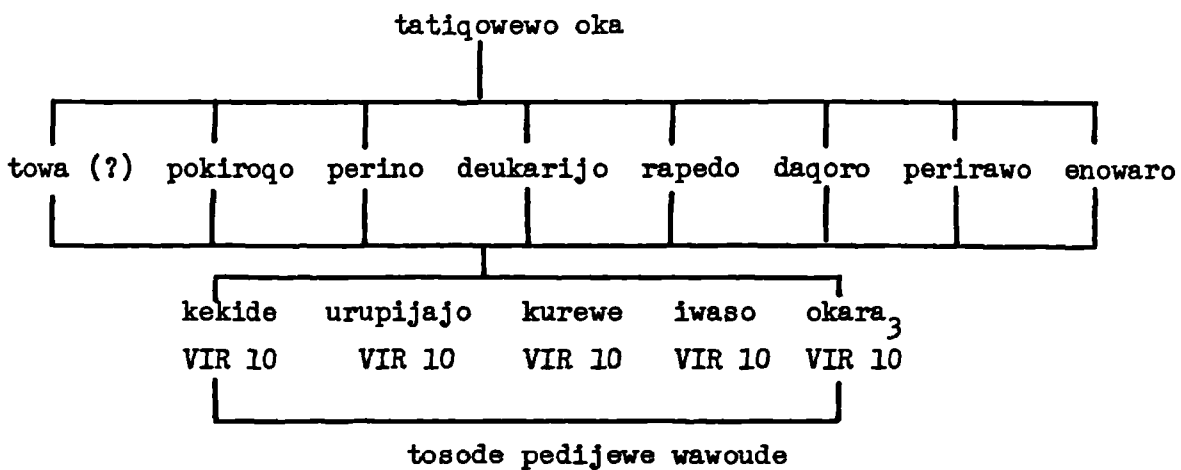
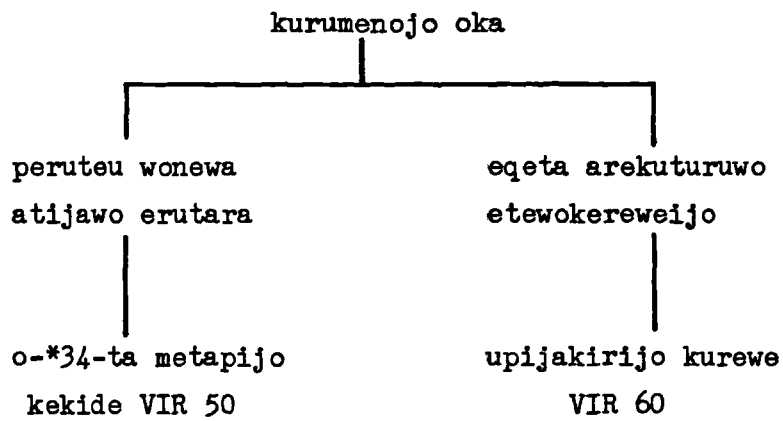
In practice, most groups of "soldiers" are accompanied either by "officers" or by a "follower", which probably means that the pronoun pe-i refers only to the last group of "soldiers", and e-qe-ta holds the same position in the hierarchy of o-ka as the whole group of "officers". Thus, the tablets An 519, 654, 657, and 661.1-7 have the following structure:

An 519

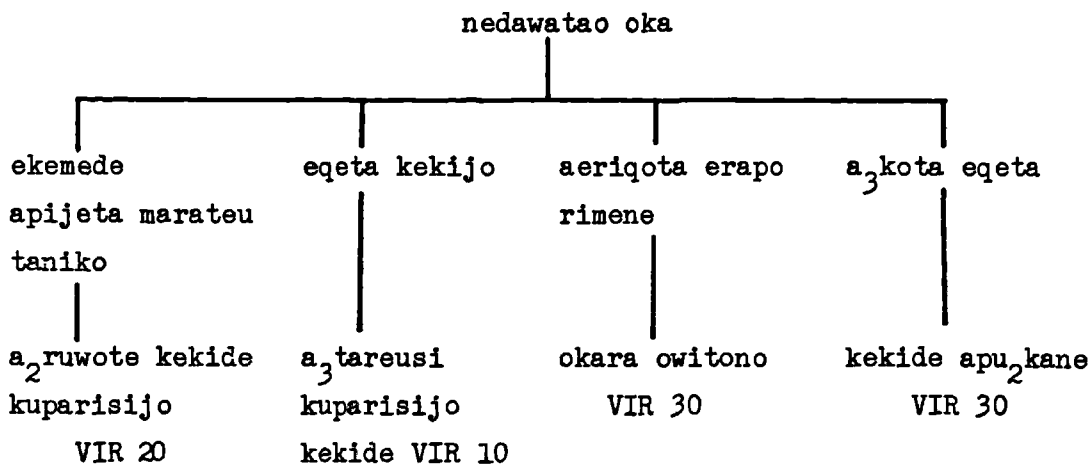
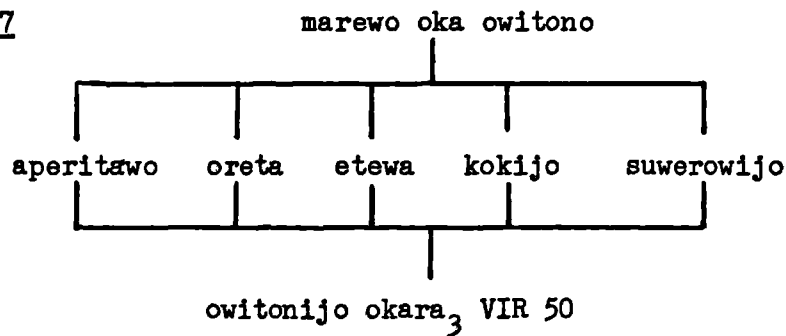




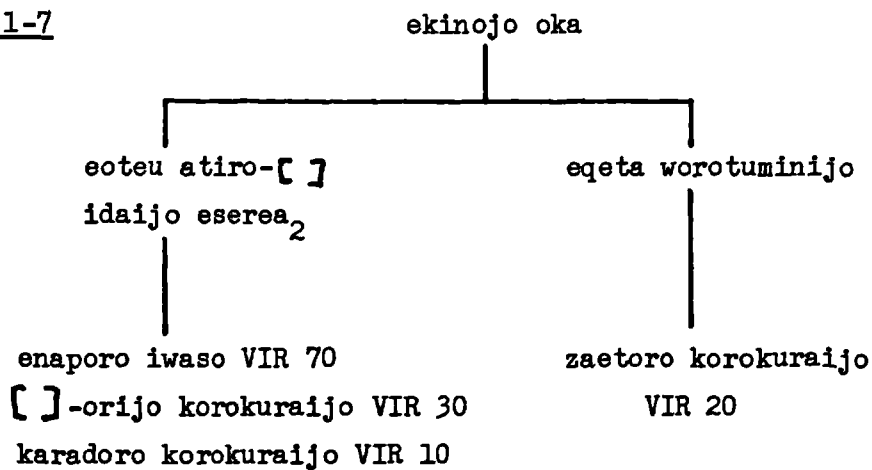
An 654



An 657



An 661.1-7



An 656 and 661.9-13 have a more complex structure: three groups of "soldiers" are accompanied both by "officers" and by e-qe-ta (An 656.2-9, 12-16; An 661.10-13). At first sight it seems that the e-qe-ta

holds a position intermediate between those of the "commander" of o-ka and the "officers". However, in two cases different locations are indicated for the o-ka itself and for the group of "soldiers" accompanied by e-ge-ta, and in the third case the "soldiers" are called wa-ka-ti-ja-ta ke-ki-de sa-pi-da, without either ideogram or numeral. The word sa-pi-da here probably explains the absence of this group, though it may simply be another indication of place.

To show the structure of these texts, we must take into account the location of each subgroup of personnel as well as its hierarchy.

Table VI (An 656)

location	waparojo oka	
newokito	erikowo	eqeta diwijeu
	a ₂ dijeu akiwonijo	wowija korokuraijo VIR 20
sapida (?) (absent)	eqeta pereqonijo areiyo	
	wakatijata kekide	
	duwojojo oka	
akerewa	a ₂ kunijo perimede pu ₂ tija	eqeta kaesameno apu ₂ ka
		korokuraijo VIR 80
porai	eqeta dikonaro adaratijo	
	apu ₂ kane kekide VIR 20	
uwasi	pereuronijo eqeta	
	kekide newo VIR 10	

Table VII (An 661.9-13)

location	ekomenatao oka
timito akei	ma-[]-u roqota ake-[]-u akewato
nedowotade	eqeta
	a ₂ kaa ₂ kirijo urupijajo VIR 30

If this is the structure of the o-ka units, the "general impression" of their military character needs some confirmation from other evidence, and conspicuously from any military texts or group of texts of similar structure. Webster¹⁰⁵ made an attempt to identify such texts, and he pointed to one small group of cuneiform documents from Alalakh (AT 180-182), known also as the "SA.GAZ texts", as the only close parallel. These texts are the lists of named warriors, among them several charioteers (bēl ^{giš}narkabāti) under the heading: sābū^{meš} ^{lú}SA.GAZ bēl kakki^{meš}. However, any resemblance between them and the o-ka tablets exists only in Wiseman's English translation of this sentence: "armed forces of (amel)SA.GAZ"¹⁰⁶. Later it was proved by Bottéro¹⁰⁷ and Greenberg¹⁰⁸ that the logogram SA.GAZ should be read hāpiru which signifies not the title of the commander but the type of the warriors. Hence the new translation accepted by CAD: "weapon-carrying SA.GAZ soldiers" (VI p. 84).

Thus, the SA.GAZ texts from Alalakh are to be compared rather with the list of charioteers (a-ni-o-ko) from Knossos (V 60) than with the o-ka tablets, since they lack a hierarchical structure. This feature is typical of other Near Eastern economic archives, where soldiers are mentioned frequently, but in a limited number

of contexts: as recipients of food-rations, as land-holders, in quotas of conscripts from specific villages, or in lists of the distribution of weapons (especially in Ugarit¹⁰⁹); but never in actual military formations, which are found in entirely different types of documents - royal letters, orders, and instructions¹¹⁰.

Because of the great importance of this observation, which concerns the very nature of the Mycenaean archives, let us clarify the point. The Hittite texts KBo XVI 66, KUB XXXI 33 and 62¹¹¹ are apparently similar to the o-ka tablets, in that they consist of repeated paragraphs written according to a formula:

"PN, man of GN, under him so many soldiers" (KBo XVI 66, KUB XXXI 33), or:

"so many soldiers from GN, in front of them PN" (KUB XXXI 62).

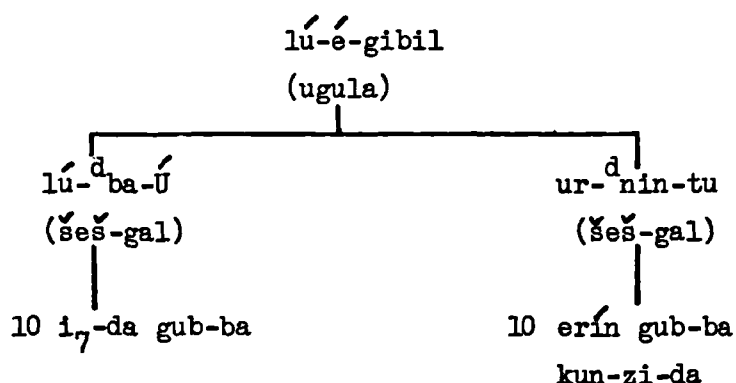
However, these are the texts of the oaths (li-in-ki-ja, KUB XXXI 62, I.38) taken by Kaška - mercenaries of the Hittite king - and are used as adjuncts to the treaties with their tribal chiefs. Nothing of this sort has been found in the Linear B archives, and such documents cannot be expected there, since they belong to a different type of archive, which I would call "chancellery" as opposed to "economic"¹¹².

If we turn to non-military texts in economic archives from the Near East, very close parallels to the o-ka tablets can easily be found, notably in the so-called erín texts from the period of the Third Dynasty of Ur. Ironically, in the early days of Sumerian studies, these texts, like the o-ka tablets, were regarded as lists of soldiers¹¹³. The word erín itself, and its Akkadian equivalents sābu and ummanu, indeed, mean "soldier" or "army" (in collective sense), but only in literary texts¹¹⁴. In Sumerian and Akkadian economic texts these words have no direct connection with the military sphere, but are used as designations of workers of a certain type and of their work-teams¹¹⁵. Since the largest number of erín

texts of different kinds come from the time of Ur III, it may be best to restrict our comparisons to that period.¹¹⁶

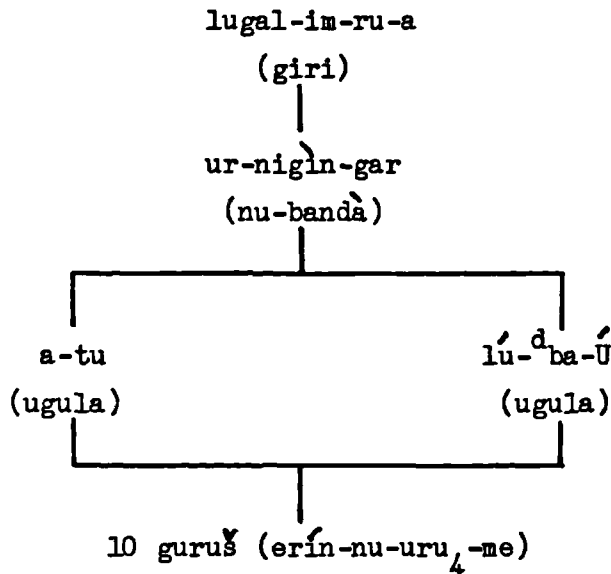
The structure of lists of erín is described by Maekawa: "The basic unit in an erín-troop was the group of ten people (nam-10) whose foreman was called šeš-gal (-nam-10). As an ideal type, an erín-troop was composed of ten nam-10 groups and was directed by an inspector (nu-banda)"¹¹⁷. Both of the titles of the supervisors - šeš-gal ("big brother") and nu-banda (Akkadian lāputu) - like the word erín itself, are borrowed from the military vocabulary, where they designate certain ranks of officers. Both workers and supervisors may be listed named¹¹⁸ and unnamed¹¹⁹, or supervisors only may be named¹²⁰. The last type of record is the most relevant for our purpose, and the text MVN VII 442 can be used as a simple example: it records two groups of irrigation workers, one of them stationed on the main canal (i₇-da gub-ba) and the other on its side-ditch (erín gub-ba kun-zi-da). Three supervisors are involved: one with the title ugula is in charge of both groups and two šeš-gal's under him, each in charge of 10 erín-workers.

MVN VII 442



Structurally, the o-ka tablets differ from this text in only one respect: the named supervisors are there listed together, so that we do not know how many people each one is responsible for. However, this type of record can be found among erín-texts as well. For example, MVN VI 469 has following structure:

MVN VI 469



This text belongs to a set of twenty three¹²¹, issued during the 36th year of Šulgi and dealing with transactions of barley rations from the granary-keeper (ka-gur) Ad-da-mu on behalf of several teams of workers (guruš), described also as "not-ploughing erín" (erín-nu-uru₄-me), through two officials (Lugal-im-ru-a and Ur^dBa-Ú) called giri, which is not a title but a bureaucratic term meaning "through, via"¹²². The complete structure of the manpower unit under the responsibility of Lugal-im-ru-a can be reconstructed from the texts MVN VI 183, 189, 469, 472; MVN VII 75, 245. It includes four nu-banda (Ur-gar, Ur-nigín-gar, KA.KA and Na-ba-ša₆), six ugula (Ku-li, Ur-mes, A-tu, Lú^dBa-Ú, Ur-ša₆-ga, and Lú-dingir-ra) and 26 guruš.

This paramilitary hierarchical structure and the military titles of supervisors (nu-banda and šeš-gal) are so typical of the lists of erín that, even when a small group of erín is attached to the team of millhouse workers (TuT 139), they are listed unnamed (the only such persons in the text), so that they appear only through the names of four šeš-gal's with two erín under each¹²³.

erín were distinguished from the rest of workers of the Ur III period in that they were never specified by occupational terms, but frequently listed together with oxen and in connection with the fields

Table VIII (TuT 139, IV.16-21)

ugula	lú-dingir-ra			
šeš-gal	šeš-kal-la	uru-ni-ba-ág	ur- ^d iškur	ur- ^d ba-Ú
erín	2	2	2	2

on which they were working¹²⁴. This type of text may be represented by BM 13661 (unpublished)¹²⁵ which has a very complicated structure. Two large groups of workers are there recorded: one under Sanga-^dNin-gír-su worked on the field (a-šà) En-nu-lum-ma¹²⁶, and another, under Á-gu-gu, on the field Lugal-nam-tar-ri. The first group consisted of erín, šà-gu₄ (ox-drivers), un-í1 and guruš-hun-gá (hired men), and the second of dumu-dab₅-ba¹²⁷. Each one of these five categories of workers worked under a separate supervisor, but both fields were also subdivided into 13 smaller plots (gán), each under the responsibility of a "cultivator" (engar)¹²⁸, so that the work-teams were distributed not only among the supervisors but also among these plots. To leave aside un-í1, guruš-hun-gá and dumu-dab₅-ba, the structure of the teams of erín and šà-gu₄ (in total they are listed together) is tabulated on Table IX.

This paramilitary structure of the work-teams and the use of the military terminology in a non-military context were not restricted to ancient Mesopotamia. I have chosen the material from Ur III only because this period is the best documented; but Egyptians, for example, preferred a "naval" terminology: during the Old Kingdom period the work-teams of private households (pr dt) were called išwt, literally "the crew of the ship". They were even subdivided into s_i - "watches" - called according to the parts of the ship: "bow" (w;dt), "stern" (imt ndst), "starboard" (imy-wrt) and "larboard" (t_i wr)¹²⁹. These two unrelated examples may indicate a reality common to several ancient

Table IX (BM 13661)

ields	oxen	men					
-šā lum-ma	gu ₄ - numun	sanga- ^d nin-gír-su (ugula)					
		ša-gu ₄		erín			
		lugal-ti-ra-aš (ugula)	a-kal-la (ugula)	ur- ^d nanše (ugula)	lugal-sipa (ugula)	ír-mu (ugula)	ur- ^d ba-ú (ugula)
nin-gír-su	4	5	7	4	4	3	
šara- ^d ba-ú	3			12			
nin-giš-zi-da	2					15	
l-dumu-šè	2	[]	6			14	
ba-ú	2				13		11
-mar ^{ki} -ka	1			9			
iri ₁₇ -zal	1	5		5	5		
ki>-gu-la	1	5					9

societies, of organising workers, recruited for compulsory corvée service, in paramilitary fashion.

In fact, if we set out to find parallels to o-ka tablets among non-military texts, we do not need to go far beyond Pylos. For a long time the o-ka tablets were artificially dissociated from the rest of the Mycenaean lists of personnel and were regarded as unique in the Linear B corpus. However, as we have seen, the o-ka tablets belong to class III.1 of "mixed lists of named and unnamed persons with three levels of hierarchy" (p. 56) which they share together with two groups of texts of a very similar structure: "ke-ro-si-ja tablets" (PY An 261, 616) and "za-mi-jo texts" (KN As 1517 Obv. 11-13, Rev. 1-3; PY An 129.1-4).

The Pylian text An 261 is written (on the obverse) according to a formula:

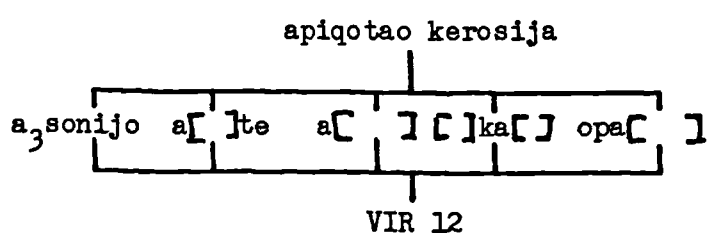
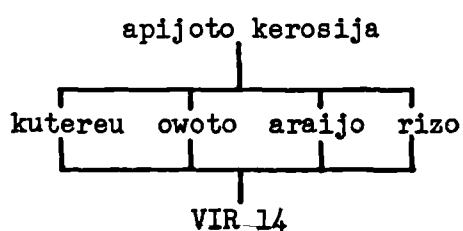
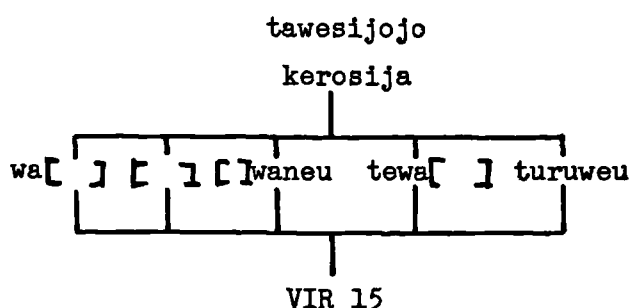
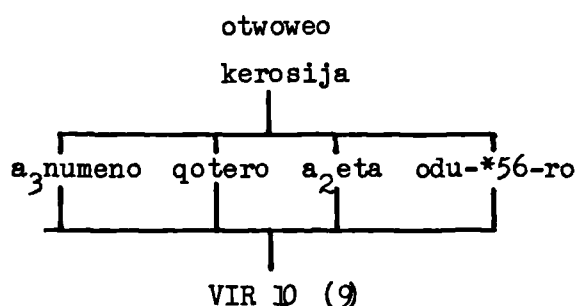
PN₁(gen.) ke-ro-si-ja PN₂(nom.) VIR 1

The reverse gives the total for each ke-ro-si-ja:

PN₁(gen.) ke-ro-si-ja VIR x

Four heads of ke-ro-si-ja (PN₁) and eighteen of their members (PN₂) are listed by name on the obverse, but the totals on the reverse are much higher - 69 unnamed men (68 according to An 616) are numbered against the four names. In other words, the hierarchy of ke-ro-si-ja includes three levels:

- 1) four heads of ke-ro-si-ja;
- 2) 18 named subordinate supervisors;
- 3) 51 (or 50) unnamed workers.



"za-mi-jo texts" are two small sections from larger tablets:

PY An 129.1. pa-ro ti-ki-jo

2. a-ta-ro-we VIR 1

3. pe-re-wa-ta VIR 1

4. za-mi-jo pu-ro-jo VIR 10

"At (the disposition of) Tikijo: Atarowe one man, Perewata one man, zamijo from Pylos ten men".

KN As 1517 Obv. 11. o-pi e-sa-re-we to-ro-no-wo-ko

12. po-to-ri-jo 1 pe-we-ri-jo 1

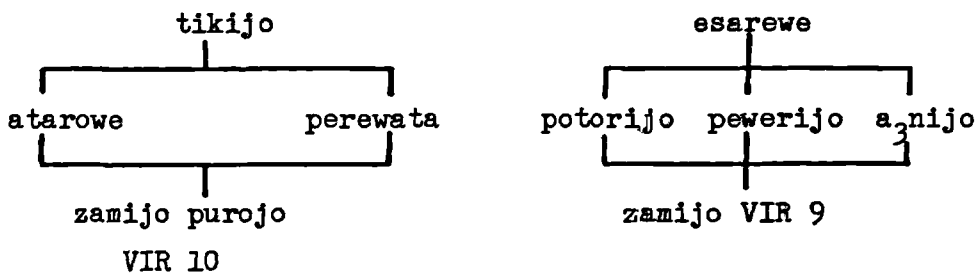
13. a₃-ni-jo 1

Rev. 1.

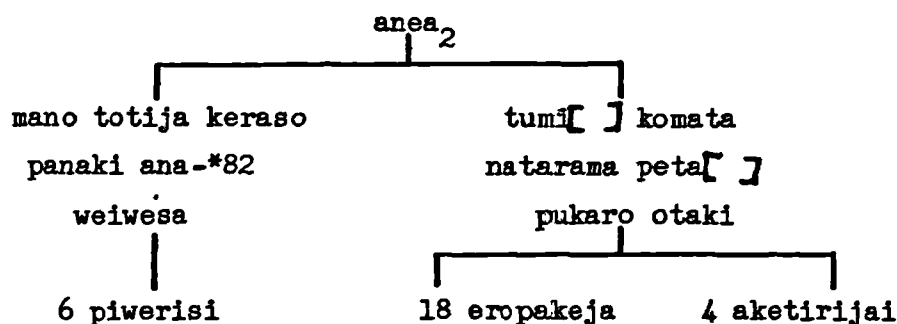
2. za-mi-jo VIR 9

3.

"At (the disposition of) Esareu the chair-maker: Potorijo one (man), Pewaterijo one (man), Ainijo one (man), zamijo nine men".



Yet another text with a similar structure (MY Fo 101) is a ration-list, which records the distribution of olive oil to thirteen named women and three groups of women called only by the following occupational terms (in the dative plural): pi-we-re-si, e-ro-pa-ke-ja and a-ke-ti-ri-ja-i. One woman (Anea₂) receives three small units (V) of oil, the rest of the named women one unit each, and the groups of unnamed women six, eighteen and four units respectively. If one small unit of oil were the standard ration for one woman, we have here one head of the whole group, twelve named supervisors and twenty eight female workers:



Many details are unclear in these four texts (we do not know what ke-ro-si-ja¹³⁰ stands for, nor the meaning of most of the occupational terms¹³¹) but none of them has ever been regarded as "military", to say nothing about the list of women from Mycenae.

The purely structural approach which has been used up to this point, though it makes the military interpretation of o-ka tablets increasingly improbable, has not revealed the real occupation of the o-ka personnel. Occupational terms are lacking on the o-ka tablets, and in their stead are found five unintelligible words, probably of non-Greek origin; but some valuable information can be drawn from the connections of the o-ka tablets with other documents in the Pylian archive.

The clearest relationships exist between o-ka tablets on the one hand and, on the other, the N series dealing with flax¹³², Cn 3 which is a list of oxen, and Aq 64-218. The subject of this last-mentioned text is disputed, but, as we shall see later, it is probably also connected with oxen. The cross-references between the o-ka tablets and the N series are as follows:

519.1 ro-o-wa	Nn 228.2 ro-o-wa SA 35
519.8 a-pi-te-wa i-wa-so VIR 20	Na 1021 a-pi-te-wa[]
656.13 ke-ki-de po-ra-i VIR 20	Nn 228.6 po-ra-pi SA 10
657.7 ma-ra-te-u	Na 245 ma-ra-te-we ra-wa-ke-si-jo o-u-di-do-si SA 10
657.8 ke-ki-de ku-pa-ri-si-jo VIR 20	Na 514 [ku]-pa-ri-so ke-ki-de e-ko-si SA30
657.10 ku-pa-ri-si-jo ke-ki-de VIR 10	
654.3 me-ta-pi-jo ke-ki-de VIR 50	
654.15 wa-wo-u-de ke-ki-de VIR 10	Na 103 [ke]-ki-de SA 16
656.4 wa-ka-ti-ja-ta ke-ki-de sa-pi-da	
656.15 ke-ki-de ne-wo VIR 10	
657.13 ke-ki-de a-pu ₂ -ka-ne VIR 20	
661.3 e-na-po-ro i-wa-so VIR 70	Na 1027 e-na-po-ro SA 7 Nn 228.6 e-na-po-ro SA 33[]

661.5 ka-ra-do-ro ko-ro-ku-ra-i-jo VIR 10	Na 543 ka-ra-do-ro ko-[ro]-ku-ra-i-jo e-ko-si SA 30
661.4 [] -o-ri-jo ko-ro-ku-ra-i-jo VIR 30	Na 516 [] ko-ro-ku-ra-i-jo e-ko-si SA 10
661.6 za-e-to-ro ko-ro-ku-ra-i-jo VIR 20	
614.4 [ko-ro]-ku-ra-i-jo VIR 1 []	Na 396 wo-no-ae-wa ko-ro-ku-ra-i-jo
656.7 wo-wi-ja ko-ro-ku-ra-i-jo VIR 20	e-ko-si SA 30
656.18 a-ke-re-wa ko-ro-ku-ra-i-jo VIR 80	Na 405 to-ro-wa-so ko-ro-ku-ra-i-jo e-ko-si []
519.11-12 u-ru-pi-ja-jo o-ru-ma-si- ja-jo VIR 30	
654.16 u-ru-pi-ja-jo VIR 10	Na 928 a ₂ -ke-wo-a-ki u-ru-pi-ja-jo
661.12 a ₂ -ka-a ₂ -ki-ri-jo u-ru-pi- ja-jo VIR 30	e-ko-si SA 10
661.10 ti-mi-to a-ke-i	Na 361 ti-mi-to-a-ke-e SA 50

All three terms which describe the unnamed members of the o-ka personnel (ke-ki-de, ko-ro-ku-ra-i-jo, u-ru-pi-ja-jo) are found in the Na tablets (sometimes with the same ethnics) in connection with the formula "e-ko-si SA x" - "they have so much flax". According to the most plausible explanation of this formula, offered by Chadwick¹³³, it refers to a holding of land-plots which produce (or need for a sowing) a certain amount of flax. This view is supported by the use of the land-holding term a-ki-ti-to with the word e-ke on Na 926, 1086, and the use of the similar formula "PN e-ke to-so-de pe-mo GRA x" - "PN have so much seed" - in the land-survey Es 650.

Several place-names known as locations of o-ka units (Enaporo, Porapi, Roowa, Timito-akei, and possibly Apitewa) are found in the Na tablets with another formula - "GN SA x" - or on Nn 228 which has a heading "o-o-pe-ro-se ri-no o-pe-ro" - "they owe flax (as) a deficit" - followed by a list of place-names recorded according to the same formula. All these texts refer to the tax-duties of different villages, though

in the Na tablets the amount of flax actually contributed is recorded, while Nn 228 is the summary of a deficit in tax-payment.

Finally, on Na 245 a group of people called ma-ra-te-we ra-wa-ke-si-jo (nom. pl.) - "maratewe belonging to lawagetes" - from Ewiteweiyo is recorded as those who "do not give" (o-u-di-do-si) ten SA-units of flax, while on An 657 the same word in the singular is used as a name of one of the "officers" in the o-ka of Nedawata. Since another group of people mentioned on Na 568 who did not pay their tax is na-u-do-mo (ship-builders), this word is probably an occupational term used on An 657 as a proper name¹³⁴.

Cn 3 is the text most obviously connected with the o-ka tablets:

Cn 3

e-re-u-te-re di-wi-je-we	An 656 e-qe-ta di-wi-je-u
a ₂ -ra-tu-a o-ka-ra ₃	An 519 o-ka-ra ₃ a ₂ -ra-tu-wa VIR 110
pi-ru-te ku-re-we	An 519 pi-ru-te ku-re-we VIR 50
e-na-po-ro i-wa-si-jo-ta	An 661 e-na-po-ro i-wa-so VIR 70
o-ru-ma-to u-ru-pi-ja-jo	An 519 u-ru-pi-ja-jo o-ru-ma-si-ja-jo VIR 30
a ₂ -ka-a ₂ -ki-ri-jo u-ru-pi-ja-jo	An 661 a ₂ -ka-a ₂ -ki-ri-jo u-ru-pi-ja-jo VIR 30

All five groups of people, who are certainly the same as in the o-ka tablets, are listed on Cn 3 against one ox (BOS 1) under the heading:

Cn 3.1. jo-i-je-si me-za-na

2. e-re-u-te-re di-wi-je-we qo-o

Like many other sentences in Mycenaean Greek, this one permits several different interpretations. Most probably it says that somebody sends (-i-je-si, 3 pl. pres.) oxen (qo-o, acc. pl.) to Diwijeu, whose title is ereuter (e-re-u-te-re di-wi-je-we, dat. sing.), while the syntactical position of me-za-na is uncertain¹³⁵. The use of proclitic jo- which opens the sentence shows that this could be the first

tablet in a set, of which the others did not survive or were never written. At Knossos oxen are frequently alled we-ka-ta - "working" (Ce 50, 59, C 1044, 1582, 5734; in abbreviated form we in Ch 890, but no such texts have been recognised in the large and well-preserved Pylian archive; which is surprising, especially since even among the only 24 fragments found at Tiryns one is a list of oxen (Cb 4). Perhaps Cn 3 fills the gap, and the oxen recorded there were used for ploughing and not for food¹³⁶ or sacrifice¹³⁷, as is usually supposed.

Another text, closely associated with the o-ka tablets, which may confirm this view is Aq 64-218. These two tablets constitute a single document which is subdivided into four sections by headings:

- 1) [qa]-si-re-wi-jo-te - "those holding office of gasireu";
- 2) o-da-a₂ ko-to-na e-ko-te - "those having kotona (kind of land)";
- 3) o-da-a₂ a-na-ke-e o-pe-ro-te - "those owing to lead up (men);
- 4) o-da-a₂ e-ke-jo-to a-ko-to-no - "those ... without kotona"¹³⁸.

Two first sections are written according to a formula: "PN (followed by a title, ethnic or patronymic) to-to we-to o-a-ke-re-se/o-u-ge a-ke-re-se ZE 1 *171 x (from 0 to 12)" - "PN took/did not take this year one pair, x *171"¹³⁹. The third section has the structure: "PN VIR 1" ("PN one man"), and the fourth section, "PN ZE 1" ("PN one pair").

The following names, titles and ethnics are common to Aq 64-218 and o-ka personnel:

Aq 64

<u>ku-ru-me-no</u> <u>mo-ro-qa</u> <u>i-te-re-wa</u>	An 654 <u>ku-ru-me-no-jo</u> <u>o-ka</u>
<u>ko-re-te</u>	An 519 <u>ka-da-si-jo</u> <u>mo-ro-qa</u>
<u>pe-ri-me-de-o</u> i-*65 <u>po-so-ri-jo-no</u>	An 656 <u>pe-ri-me-de</u>
<u>te-ra-ni-ja</u>	
<u>po-ki-ro-go</u> <u>e-ge-o</u> <u>a-to-mo</u>	An 654 <u>po-ki-ro-go</u>
<u>e-ta-wo-ne-u</u>	An 519 <u>e-ta-wo-ne-u</u>
<u>ne-ge-u</u> <u>e-te-wo-ke-re-we-i-jo</u>	An 654 <u>e-ge-ta</u> <u>a-re-ku-tu-ru-wo</u>
	<u>e-te-wo-ke-re-we-i-jo</u>

me-wi e-ru-ta-ra me-ta-pa
ki-e-wo

Aq 218

ne-wo-ki-to i-je-[re]-u
da-i-ja-ke-re-u

[ro]-u-ko ku-sa-me-ni-jo me-ta-pa
a-e-ri-qo-ta[] o-wi-to-no

a₃-ko-ta a-da-ra-[ti-jo]

pa-ku-ro₂ de-wi-jo

[a]-ka-re-u e-ko-me-na-ta-o
*34-te

[] ke-ki-jo

ma-ra-te-u a-pu-ka

An 654 a-ti-ja-wo e-ru-ta-ra o-*34-ta
me-ta-pi-jo ke-ki-de VIR 50

An 656 wa-pa-ro-jo o-ka ne-wo-ki-to

An 519 e-qe-ta ro-u-ko ku-sa-me-ni-jo

An 657 a-e-ri-qo-ta e-ra-po ri-me-ne
o-ka-ra o-wi-to-no VIR 30

An 656 e-qe-ta di-ko-na-ro a-da-ra-ti-jo

An 657 a₃-ko-ta e-qe-ta

An 519 a₂-te-po de-wi-jo

An 661 e-ko-me-na-ta-o o-ka
a-ke-re-u

An 657 e-qe-ta ke-ki-jo

An 656 e-qe-ta ka-e-sa-me-no a-pu₂-ka

An 657 ma-ra-te-u

Seven of the men here are almost certainly the same persons as those in the o-ka tablets (Kurumeno, Pokiroqo, Etawoneu, Rouko, Aeriqota, Aikota, Marateu), while five others are most probably sons (Posorijono son of Perimede) and brothers (Neqeu and Arekuturuwo, Aikota and Dikomaro, Pakuro₂ and A₂tepo, Akareu and Ekomenata¹⁴⁰) of the members of the o-ka staff.

The best interpretation of Aq 64, in my opinion, was offered by Melena¹⁴¹ and it includes several important observations:

1) the verb a-ke-re-se refers to the ideogram *171 and not to the sign ZE (when *171 is absent, this verb takes a negative form, o-u-qe a-ke-re-se);

2) the syllabic sign ZE is used here as an abbreviation of the word ζεύωγ, "a pair", as in all other references in Linear B, where it stands for a pair of wheels (PY Sa series, KN Sg, So series), of oxen (KN Ce, Ch, C series) or of horses (KN Sc series);

3) the ideogram *171, which is closely associated with galingale on KN Ga 464 and 519 (written ideographically PYC on Ga 464 and phoneti-

cally ku-pa-ro on Ga 519), means some kind of measure unit (pack?) of this marsh-plant. Since it is known from PY Fa 16 and classical sources (Od. IV 603, Hesych. κῦπερον) that galingale was used as fodder for horses¹⁴², Aq 64 probably records the distribution of fodder for animals - horses, if the context is military, or oxen if it is agricultural. The latter possibility is more likely, since agricultural terminology is found in the headings of Aq 64-218: ko-to-na e-ko-te and a-ko-to-no.

In fact, some more information about the purpose of Aq 64-218 can be gained from the way in which its four headings relate to each other. Headings (2) and (4) mentioned above refer to rights or obligations towards the land ("those with and without ko-tona"), but headings (1) and (3) deal with the responsibility over men, since qasireu is a title of supervisors in PY Jn 431, 601, 845, and qasire-wija is a type of work-team in KN As 1516. On the other hand, headings (1) and (2) have a positive meaning, while headings (3) and (4) are negative, since o-pe-ro in Linear B usually indicates the failure to fulfil certain obligations¹⁴³.

Table X

sphere of responsibility	§	Aq 64	Aq 218
		on duty	off duty
men	1	qasirewijote	anakee operote
land	2	kotona ekote	akotono

This double set of oppositions, qa-si-re-wi-jo-te - a-na-ke-e o-pe-ro-te and ko-to-na e-ko-te - a-ko-to-no, finds remarkably close correspondence in Sumerian terms frequently used in erín-texts: bala-gub-ba (on duty) and bala-tuš-a (off duty)¹⁴⁴, on the one hand, and gán-dab₅ - "those holding plots of land" and nu-dab₅ - "those

not holding (plots of land)"¹⁴⁵ On the other hand. The first pair of terms is used to indicate rotation of erín-troops employed in ploughing or irrigation during their corvée service¹⁴⁶. It is conceivable that Aq 64-218 reflects the similar system of rotation involving o-ka personnel.¹⁴⁷

In short, the texts of the N series, Cn 3 and Aq 64-218, connect the o-ka tablets with agricultural activity, and specifically with the cultivation of flax and work with ploughing oxen.

A further item of information about the o-ka tablets can be drawn from the analysis of the position and functions of e-qe-ta¹⁴⁸, a title found twelve times in the o-ka set. There is currently a curious discrepancy concerning the position of e-qe-ta at Pylos and Knossos: at Pylos e-qe-ta is generally regarded as the military title¹⁴⁹, mainly on the basis of the military interpretation of the o-ka tablets; while, according to Melena, "e-qe-ta of Knossos are closely related to the Cretan system of production, perhaps as supervisors of the manufacture and distribution of goods... The denomination e-qe-ta may apply to those responsible for the different workshops in the same way as it applies to the supervisors of labour teams working on different crafts at Knossos"¹⁵⁰.

However, the functions of e-qe-ta at Knossos cannot be very different from those at Pylos, since on both PY Wa 917 and KN As 4493 this word is found in a very similar context:

Wa 917. 1. []o-da-sa-to a-ko-so-[ta]
 2. []e-qe-ta e-re-u-te-re []
 As 4493. 1. []e-pi-ko-wo e-qe-ta e-re-u-te-[re]
 2. []-da-mo / e-ro-pa-ke-u // VIR 1 ko-ki-[]
 3. []-jo / ra-wo-po-qo ze-ro []

For a proper understanding of these two tablets, we need to examine three more texts, PY An 607.3-4, Cn 3.1-2, and KN Fh 364:

An 607.3. MUL 6 do-qe-ja do-e-ra e-qe-ta-i e-e-to

4. te-re-te-we MUL 13

Cn 3 1. jo-i-je-si me-za-na

2. e-re-u-te-re di-wi-je-we qo-o

Fh 364 a. [do]-ke a-ku-tu-ru-wo [

b. [e]-re-u-te-si OLE [

All these five texts have a similar syntactic structure: the verb, the subject, the titles - eqeta (Diwijeu on Cn 3 is eqeta according to An 656) and/or ereuter, which are both in the dative singular (PY Cn 3, Wa 917, KN As 4493) or plural (PY An 607, KN Fh 364), and the logical object of the verb. The verbs are: e-e-to - "they were sent" - on An 607, i-je-si - "they send" - on Cn 3, da-sa-to - "he allocated" - on Wa 917, do-ke - "he gave" (on As 4493 the verb is probably lost through the fracture at the beginning of line 1). The logical objects of these verbs are thirteen women (do-qe-ja do-e-ra MUL 13) on An 607, oxen (qo-o) on Cn 3, one or more men (VIR 1) described by the occupational term e-ro-pa-ke-u on As 4493, olive oil (OLE) on Fh 364, and probably the flax on Wa 917, since this clay-label is closely associated with the N series by the scribal hand (No 1) and the "stylus" (No 106). The subject is certain only on Wa 917 and Fh 364: on Wa 917 it is Akosota, the well known Pylian "collector"¹⁵¹; on Fh 364 the otherwise unknown a-ku-tu-ru-wo should probably be read as a-(re)-ku-tu-ru-wo - Ἀλεκτρούων¹⁵². On An 607 the logical subject is absent since the verb is in the passive; on Cn 3 it is uncertain (me-za-na, or the people mentioned in lines 3-7, or both); and on As 4493 the subject could be e-pi-ko-wo if the verb were transitive, or it could be the collective description of the men listed in lines 2-3 if the verb were intransitive or passive. To clarify the above, the structure of these five texts is shown in table XI.

Thus, e-qe-ta appears in a clearly occupational context as a recipient of men, women (both described by occupational terms), oxen, oil, and flax, both at Pylos and Knossos. The word e-pi-ko-wo, which connects once again the type of records discussed with the o-ka tablets, only closes the circle.

Table XI

	An 607	Cn 3	Wa 917	As 4493	Fh 364
the verb	e-e-to	-i-je-si	-da-sa-to	[]	[do] -ke
e recipient"	e-ge-ta-i	e-re-u-te-re di-wi-je-we	e-ge-ta e-re-u-te-re	e-ge-ta e-re-u-te-[re]	[e]-re-u-te-si
e object"	do-ge-ja do-e-ra MUL 13	qo-o	flax ?	e-ro-pa-ke-u VIR 1	OLE
e subject"		me-za-na ?	a-ko-so-ta	e-pi-ko-wo ?	a-⟨re⟩ -ku-tu-ru-wa

Finally, KN B 1055 can be regarded as a Knossian equivalent of the Pylian o-ka tablets. This text has a heading ko-no-si-jo e-ge-ta ("followers from Knossos") followed by at least eight personal names, with a large break in the middle and a total: to-so pa-te VIR 213 ("altogether, 213 men"). Regardless of the actual size of the break, 213 names cannot be written on the one tablet, and it follows that the only reasonable solution is that offered by Chadwick¹⁵³: as in the o-ka tablets, several named persons are recorded here, together with unnamed ones who appear only through the total, and the heading probably refers only to the named personnel. This interpretation confirms our conclusion that e-ge-ta were supervisors of the work-teams, and not "liaison officers", on the o-ka tablets as well. It seems that the vision of the Old German "Gefolgschaft" rather than the evidence of the texts themselves has guided the study of the position of e-ge-ta at Pylos.

Conclusions: The following features are common to the o-ka tablets and the Sumerian erín texts:

- 1) the hierarchical structure of the teams;
- 2) the absence of occupational terms;

- 3) the specification of the workers by ethnics;
- 4) the careful indication of the location of the team;
- 5) the association with ploughing oxen (through Cn 3 and probably Aq 64-218) .

This comparison, as well as the parallels between the o-ka tablets and other Linear B documents in respect of formal structure and cross-references and the study of the term e-ge-ta, reveal nothing military in the o-ka documents, but connect them with some sort of agricultural work, probably ploughing. If this interpretation is correct, the o-ka tablets fill a considerable gap in the information recorded in the Pylian archive. We are now at last in a position to return to the heading of the o-ka tablets on An 657: I have no intention of challenging its traditional etymologies, uncertain as they are, but it probably means "the overseers supervise the coastal areas (?)", without any military connotation.

b. Quotas of conscripts.

KN Am 568, 597, 600, 601, 819, As 40, 604, B 807, 808, 810, 813, 815, 816, 827, 985, 5752, 7035, 7043, 8006, V 56, 159, 655, 756, 1002, 1003, 1004, 1005, 1043, 1583, 7670, 7964;
PY Ac series (nine texts), An 1, 5, 18, 35, 37, 172, 207, 298, 424, 427, 610, 724, 852.

According to the case-endings of the place-names these texts refer either to the conscription of workers from certain places, or to their present location, or to their destination. If the names of the villages are in the ablative-instrumental (PY An 5, 172), the texts deal with the conscription of the workers from these places, if the place-names are in the dative-locative (An 18), they refer to the present location of the workers, and when they are in the allative, the texts record the distribution of manpower to certain places (An 35, 724). In one case (An 1) the list of the place-names

itself refers to the quotas of the conscripts (rowers) and the heading - to their destination. Unfortunately, since the ablative-instrumental and the dative-locative are distinguished in the Mycenaean dialect only in the plural (-pi and -si endings), it is impossible to tell which type represents those texts where all the place-names are in the dative singular (An 207, 298, 424, 427, 610, 852). Ethnics with the adjectival ending -jo which are very common at Knossos refer probably to the place of origin of the conscripts.

At Pylos two sets of texts dealing with the workers conscripted from or present at the same groups of villages can be established: An 5, 18, 852, and An 1, 610, 724.

Table XII

text No	An 5	An 18		An 852
type of workers	PN	ereuteri [jo]	tokodomo apeo	qoukoro
tekotoape/tekotonape	5	[]	1	[]
inapi/inane/inanija	1	1	1	
asee		1		[]
terenewe/terenewija			1	[]

Table XIII

text No	An 1	An 610	An 724
heading	ereta pereuronade ijote	ereta	roowa ereta apeote
roowa	8	39 ¹⁵⁴	21 ¹⁵⁵
rijo	5	24	10
tetarane	6	31	
aponewe/apunewe	7	37	
akerewa		25	2 ¹⁵⁶
woqewe		[]	[]

The other five texts (An 172, 207, 298, 424, 427) also constitute a set since they record the same professional groups conscripted from (or present at) different places. In the following table the numerals in brackets refer to the number of place-names mentioned.

Table XIV

text No	An 172	An 207	An 298	An 424	An 427
raptere	10 (5) ¹⁵⁷	20[] (5)	2 (2)	23[] (3)	
dakoro		12 (1)		2 (1)	5 (1)
meridamate/ meridumate		2 (1)		2 (1)	5 (1)
pukawo				6 (1)	3 (1)

The best parallel outside the Linear B corpus to the texts of this group is provided by the numerous lists of conscripts from various villages at Ugarit¹⁵⁸. There are sixteen such lists in the alphabetic script (UT 64, 83, 108, 113, 321, 330, 1024, 1118, 2015, 2040, 2042, 2046, 2071, 2073, 2076) and two more are written in Akkadian (PRU III 11.830, PRU VI 93.131). Three types of texts discussed have their correspondences among them: lists of names specified by ethnics (UT 64, 2071) or place-names (UT 330, 2015, 2046), quotas of unnamed conscripts from various places (UT 83, 113, 321, 2040, 2042, 2073, 2076, PRU VI 93.131), lists of occupations and place-names (UT 1024).

The purpose of these texts is stated most explicitly in UT 2042 which has a heading: spr hrd - "list of the conscription"¹⁵⁹. Some of them refer to a military conscription: UT 113, 321 and PRU VI 93.131 are quotas of the bowmen from different villages, UT 64 and 2071 are lists of soldiers of certain type (mdrglm)¹⁶⁰ with ethnics. Others deal with the conscription for corvée work: in UT 2040 men (bnšm) with donkeys (hmrn) are listed, UT 108, 109 and PRU III 11.830 count months (yrhm) and days (yym) of service performed by different villages.

Two Ugaritic texts (UT 83 and 1024) have especially close parallels at Pylos. UT 83 records the crews of the ships (sbu' anyt) conscripted from several villages, being thus an exact parallel to the Pylian "rowers' set" (An 1, 610, 724)¹⁶¹. In UT 1024 several groups of builders (hrsm) are said to be "those who work" in various places (dt tb'ln b GN) just as in An 35.

The most striking feature of the Ugaritic texts of this kind is their close connection with taxation: numerous lists of the same villages record the quotas of various commodities delivered by them as a tax¹⁶². In other words, the quota of men for a certain number of days provided by the village for corvée work or military service was regarded as a kind of "tax" imposed upon them by the central authority.

This feature too has its correspondence at Pylos. For the purpose of taxation the Pylian kingdom was divided into two provinces subdivided into sixteen districts¹⁶³. According to the Ma series each of these districts had to deliver six unidentified commodities in an unvarying proportion which probably corresponds to the relative size of the district and its population. This proportion is known as the "Law of Olivier"¹⁶⁴, and the remarkable thing is that the number of men conscripted from six of these districts fits this "law" according to the Ac series (see table XV).

There is however one significant difference between the Ugaritic and the Mycenaean quotas of conscripts: at Ugarit the professional groups are listed always separately in the so-called "guild-lists" (in Ugaritic: KTU 4.174, 4.610, 4.752, UT 63, 80, 82, 113, 114, 115, 163, 169, 170, 300, 305, 306, 400, 1024, 1028, 1029, 1030, 1031, 1038, 1039, 1091, 2011, 2019, 2084; in Akkadian: PRU III 15.172, 16.257, PRU VI 93.131, 136) while at Knossos and Pylos they are frequently specified by ethnics or place-names (class II.3). The difference is realised in the most straightforward way in UT 113 and PRU VI 93.131. In UT 113 the list of villages is followed by the list of professional groups ("guilds") and in PRU VI 93.131 the villages are listed after

Table XV

series	Ac	Ma				
ideogram	VIR	*146, RI	KE	*152	0	ME
karadoro	9[] ¹⁶⁵	18	4	8	4	440
petinijo/ petono	70	63	17	27	14	1350
pi-*82	20[]	28	8	22	6	600
akerewa	16	23	7	10	5	500
temitijo/ timito-akee	17[]	24	7	10	5	500
metapa	29	28	8	12	6	600

the "guilds" as separately responsible to equip a certain number of bowmen in both cases. From KTU 4.610 it is also known that these "guilds" were collectively responsible for the tribute to the Hittite king (ārgmn špš - "tribute for the Sun"). The explanation of this situation proposed by Heltzer¹⁶⁶ is that the majority of the members of the professional groups were bnš mlk - "king's men", i. e. the dependent population under the direct authority of the Ugaritic king, while the village-dwellers were probably the members of the free rural community (qrt).

Several professional groups were collectively responsible for taxation also at Pylos. In the taxation records (Ma and Na series) they appear separately from the rest of the population. Most frequently in such contexts are mentioned smiths (ka-ke-we: Ma 90, 120, 123, 124, 193, 221, 225, 365, 378, 397, Na 104, 106, 252, 425, 529, 848, 923, 941); other professions are: "hunters" (ku-na-ke-ta-i, Na 248), "ship-builders" (na-u-do-mo, Na 568), and six other words of unknown meaning: ku-re-we (Ma 90), pe-ra₂-qo (Ma 193), ma-ra-ne-ni-jo (Ma 393), e-we-da-si (Na 104), ma-ra-te-we (Na 245), and a₃-ki-de-ja (Na 529).

However, none of these occupations appear in the group of texts discussed dealing with the conscription duties.

c. Personnel of the "households".

KN As 1519, B 798;

PY An 7, 39, 594, 1282.

By the term "household" I mean any economic unit which employed permanently or temporarily personnel consisting of different professions. It could be a palace, a work-shop, or an estate. The Mycenaean word for such a unit was probably wo-i-ko (oṽko) - "house" (KN As 1519, TH Of 36), which closely corresponds to the Sumerian é or Akkadian bītu with the same double meaning.¹⁶⁷

Three Pylian texts of this group (An 7, 39, 594) together with two ration lists connected with them (Fn 50, 1427) constitute two sets which record the personnel of "households" of the same type.

Table XVI

text No	An 7				Fn 1427
head of household	[]		qara ₂ te, paka		[]
ideogram	VIR ¹⁶⁸	OLIV	VIR	OLIV	HORD
patekoto	[]	[]v2	[]	[]	[]
pirietesi	5	[]z3	[]	T4[]	[]
tokodomo	10	[]z3	7[]	[]5	[]

The professions of the members of the first "household" (Table XVI) suggest that it was a work-shop (pi-ri-e-te-si - "sword-makers"¹⁶⁹, to-ko-do-mo - "builders", pa-te-ko-to - "carpenters"¹⁷⁰) as in An 1282 where the "wheel-makers" (a-mo-si) were found.

Table XVII

text No	An 39		An 594	Fn 50	
head of household	kasato	qara ₂ te ¹⁷¹	maritiwijo	mezane	ā ₃ kia ₂ rifo
ideogram	VIR	VIR	VIR	HORD	HORD
pukawo	16	23	10		
meridamate/ meridumate	10	6	4	V3	
mikata	3	6	1		V3
opiteukeewe	4	5		V2	
etowoko	5	4			V2
atopoqo		3		V2	
porodumate/ porudamate		4			V2

The similar but much more detailed records of the work-shop at Ur from the 15th and 16th years of the king Ibbī-Sīn can be used for comparison (UET III 1474, 1482, 1483, 1484, 1485, 1488, 1489, 1493, 1494, 1497, UET IX 542, 553, 586, 595)¹⁷². These are the lists of unnamed craftsmen (dub-nagar - "tablet-maker" (?), kū-dīm - "silver-smith", zadīm - "bow-maker", nagar - "carpenter", simug - "smith", dingir-dīm-dīm - "cultic sculptor" (?), ašgab - "leather-worker", tūg-du₈ - "tailor", ad-kup₄ - "basket-maker", gemé-lú-sa-hir-ra - "female rope-maker") in the work-shop of Īr^d-Nanna. All the workers are called gašam-e-ne - "craftsmen", they are subdivided into gín-lá-me-šè ("they are for allocation")¹⁷³ and šā-giš-kin-ti-me-šè ("those in the work-shop")¹⁷⁴. Some of them are specified as "working" (gub-ba) or "sick" (tu-ra), and few others are called "hired" (hun-gá).

The distribution of the workers in chronological order is tabulated in Table XVIII (the numerals in brackets refer to the number of sick workers).

Table XVIII

year	Ibbī-Sîn 15											IS16	[]	[]
day/month	18/1	19/2	21/2	3/3	26/3	6/4	4/5	16/6	24/6	30/6	[7]12	29/1	[]	[]
n-lā-me-šè	12(5)			14		14	[]	15	15		14	12(3)	14	
ruš-dub-nagar	[]	[]	1	1	[]	1	[]	1	[1]	1	1	[]	[]	[]
-za-su ₆ -ma ¹⁷⁵	[]	[]	[]	1	1	1	[]	1	1	1	1	[]	[]	[]
-dīm ¹⁷⁶	[]	6	-	6	6	6	[]	7	7	5[]	6	[](3)	[]	[]
dim	1	1	-	2	2	2	[]	2	[2]	2	2	2	1	[]
gar	1	2	-	2	[]	2	[]	2	2	2	2	2	2	[]
mug	1	2	-	1	[]	1	[]	1	1	1	1	1	1	[]
ngir-dīm-dīm	1	[]	[]	1	[]	1	[]	1	1	1	1	1	-	[]
-giš-kin-ti-me-šè	3(3)			5(1)	5		[]	5	5	5	5(1)	3(3)		5
-dīm	2	[]	[]	2	[]	2	[]	[]	2	2	2	2	[]	[]
gab-hun-gá	[]	[]	[]	-	[]	[]	[]	[]	-	-	-	-	[]	[]
g-du ₈ -hun-gá	[]	[]	[]	1	[]	1	[]	[]	-	-	1	(1)	[]	[]
-kup ₄	[]	[]	[]	1(1)	[]	2	[]	[]	2	2	1(1)	(2)	[]	[]
mé-lu-sa-hir-ra	1	[]	[]	1	1	1	[]	[]	1	1	1		[]	[]

The possibility of any comparison of the "household" of the second type (Table XVII) is restricted by the lack of comprehension of occupational terms which appear there. Olivier in his detailed study of this group of texts¹⁷⁷ came to the conclusion that most of them have cultic significance. However, his interpretation of these words, as well as any other, is very tentative. The composition of the "households" recorded in some of the ration-lists from Pylos and Mycenae and which can be more positively identified as cultic will be discussed separately in the next chapter.

The occurrence of the same occupations in the conscription lists (Tables XII and XIV) as well as the use of the allative (wo-i-ko-de) in KN As 1519 suggest that these workers were not the members of the permanent staff of the "households", but that they were conscripted

for their term of service like any other groups of workers.

The only thing that can be said about the heads of the "households" is the curious fact that almost all of them appear in two or more archives in a very similar context. Qara₂te is found at Thebes as a recipient of wool (Of 38), Paka - at Knossos as a head of work-team (V 1523) and at Mycenae in a textile context (Oe 112), the feminine form a₃-ki-a₂-ri-ja is found at Thebes in connection with wool (Of 25), ma-ri-ne-we-ja-i women (derivative of Marineu) are found at Thebes in the same context (Of 25, 35), finally, Maritiwijo is found both at Knossos (Da 1461) and at Mycenae (V 662). All these facts taken separately have no particular significance, but combined together they produce a very strange effect. I doubt that in the present stage of our knowledge we are in the position to solve this puzzle¹⁷⁸.

4. Conclusions.

1. the main difference between the lists of women with children and lists of men is that the latter are much more detailed. The lists of women combine the functions of records of work-teams and quotas of conscripts, since they include information about the supervisors and the places of origin of women. Among the lists of men the most similar ones are the texts dealing with conscription: Am series at Knossos and Ac series at Pylos. The records of the male work-teams have a much more elaborate structure which sometimes includes three levels of hierarchy.

Despite these differences the connection between the Pylian "women series" and the "rowers' set" and the even more frequent occurrence of the same ethnics in the lists of men and women at Knossos show that these men and women came probably from the same groups of population.

2. The registration of men named or unnamed has any significance in respect of their social position only in the lists with hierarchical structure. When all persons in the text are listed, named or unnamed,

the choice has to be explained by bureaucratic reasons only: local officials can be listed unnamed (KN V 865) and tailors - named (PY An 172), conscripts from the same villages can be listed named and unnamed (see Table XII). Women, generally, are listed named much more rarely than men: there are only a few lists of named women (KN Ap 639, 769, 5748, 5864; MY V 659; PY Vn 851, 1191), and the comparison between MY V 659 and the parallel text Fo 101 shows that the women listed there were supervisors of the female work-teams.

3. The careful registration of the absent workers is typical of the conscription system in any society based on *corvée* labour. It is found in Middle Kingdom Egypt ('ndt, Kahun XIV 7, XIX 64)¹⁷⁹, Sumer of the Third Dynasty of Ur (ideogram LÁxNI)¹⁸⁰ and Ugarit (najjālu, in Akkadian)¹⁸¹.

4. The best parallels for the Mycenaean lists of women with children and the records of the male work-teams are found among the Sumerian documents from the Third Dynasty of Ur (gemé-dumu and erín texts), but the Mycenaean conscription system is found to be similar to that of Ugarit. There is no evidence however for the existence of the "guild-structure" of the dependent population in Mycenaean Greece.

NOTES

1. J. T. Killen, The Abbreviation TU on Knossos Women Tablets, ZA 16, 1966, p. 207-212.
2. M. Lejeune, "Présents" et "absents" dans les inventaires mycéniens, PP 15, 1960; p. 5-19 (-MPM II, 1971, p. 227-239).
3. J. T. Killen, Some Adjuncts to the SHEEP Ideogram on Knossos Tablets, Eranos 61, 1963, p. 81-90.
4. J. T. Killen, The Knossos Ld (1) Tablets, CM, p. 176-179.
a-ka-i-je-ja (Of 27), ko-ma-we-te-ja (Of 35) and ma-ri-ne-we-ja (Of 25, 35) at Thebes are female adjectives in -eja derived from male names Akaijo, Komaweto and Marineu, all well attested at Knossos. By analogy a-da-ra-te-ja (Ab 338) and we-we-si-je-ja (Ab 217) at Pylos, and di-ko-na-re-ja (Ef 3) at Tiryns are probably derived from such attested male names as Adaratijo, Wewesijio and Dikonaro.
5. L. R. Palmer, Methodology in 'Linear B' Interpretations, Sprache 3, 1959, p. 128-142.
6. F. J. Tritsch, The Women of Pylos, Minoica, p. 405-445.
7. J. Chadwick, The Mycenaean World, Cambridge, 1976, p. 79.
8. I. J. Gelb, The Arua Institution, RA 66, 1972, p. 3.
9. I. J. Gelb, Terms for Slaves in Ancient Mesopotamia, Societies and Languages of the Ancient Near East, London, 1984, p. 91-92.
10. For the references see: M. Lambert, Recherche sur la vie ouvrière: Les ateliers de tissage de Lagash au temps de Lugalanda et Urukagina, Ar. Or. 29, 1961, p. 422-443; K. Maekawa, The Development of the é-mí in Lagash during Early Dynastic III, Mesopotamia 8-9, 1973-74, p. 77-144.
11. DP 154, HSS III 2, 3, 4, TSA 13, 22, BIN VIII 348, AWL 45-51, An. Or. II p. 7 (VAT 4648), Or. 34/35 p. 35-37 (VAT 4421, 4437, 4646).
12. Collected by T. Fish in his: Gemé at Umma, MCS 3, 1953, p. 47-56.
13. No 2-5 of Appendix.
14. No 1 of Appendix. Professor K. Maekawa was kind enough to inform me about this tablet.

15. Interpretation of á-š as young unexperienced workers with half wage is more likely than part-time workers. K. Maekawa, Female Weavers and their Children in Lagash - Pre-Sargonic and Ur III, ASJ II, p. 96, 98, 107.
16. I. J. Gelb, Ancient Mesopotamian Ration System, JNES 24, 1965, p. 238-240.
17. For female occupations in labour records see: T. Fish, MCS 3, p. 51-54; A. Salonen, Agricultura Mesopotamica, Helsinki, 1968, p. 302-305.
18. For the reconstruction of the organisation of textile industry in Lagash, Ur, Umma and other places see: H. Waetzoldt, Untersuchungen zur neusumerischen Textilindustrie, Rome, 1972, p. 94, 102, 108.
19. T. Jacobsen, On the Textile Industry at Ur under Ibbi-Sîn, Towards Image of Tammuz (HSS 21), 1970, p. 426, n. 37.
20. MVN VI 131 and 538 have a colophon: ěš-didlī-me - "they are (in) the individual shrines".
21. M. Sigrist, Erīn - un-īl, RA 73, 1979, p. 103.
22. В. В. Струве, Проблема зарождения, развития и упадка рабовладельческих обществ древнего востока, ИГАИМК 77, 1934, С.5
23. I. M. Djakonoff, Socio-economic Classes in Babylonia and the Babylonian Concept of Social Stratification, CRRAI XVIII, 1972, p. 41-52; Slaves, Helots and Serfs in Early Antiquity, Wirtschaft und Gesellschaft im Alten Vorderasien, Budapest, 1976, p. 45-78.
24. I. J. Gelb, JNES 24, p. 240-243; From Freedom to Slavery, CRRAI XVIII, 1972, p. 81-92.
25. J.-P. Grégoire, Archives administratives sumériennes, Paris, 1970, p. 31.
26. I. J. Gelb, On the Alleged Temple and State Economies in Ancient Mesopotamia, Studi in onore di Edoardo Volterra VI, Milano, 1971, p. 137-154; И. М. Дьяконов, Общественный и государственный строй древнего Двуречья /Шумер/, М. 1959, с. 250-251.
27. Literally: "barley rations of the New Year", but it is easy to calculate that these rations were annual - men with ration of 4 gur received 100 silà per month (1200 silà :12), with 2 gur 120 silà - 60' silà per month and so on. TuT 146 has a similar

structure.

28. I follow here a convincing explanation of K. Maekawa (by verbal communication) that the expression nu-dab₅ should be understood as abbreviation of gán-nu-dab₅ which is opposed to gán-dab₅ - "(those) holding plots of land".
29. The numbers for women and children of Girsu are restored on the basis of UNT 18.
30. AB XXV 60, ASJ VI p. 95-96, 97-98, CT III 19740, X 14315, 21355, HLC I 379, II 19, 51, 70, 87, 94, III 256, 360, 375, HSS IV 14, JAOS XVIII p. 364, 365, MVN II 185, V 165, 166, XIII 321, TuT 139, 140, 149. See: N. Schneider, Die Lohnbücher der Muhle von Sagdana, Afo 3, 1926; A. Uchitel, Daily Work at Sagdana Millhouse, ASJ 6, 1984, p. 75-98.
31. L. Oppenheim, Catalogue of the Cuneiform Tablets of the W. Eames Babylonian Collection (AOS 32), 1948, p. 76.
32. I. J. Gelb, RA 66, p. 4.
33. Akkadian nadītu. CAD XI 1, p. 63; L. Oppenheim, op. cit. p. 78; I. J. Gelb, RA 66, p. 5; P. Steinkeller, More on the Ur III Royal Wives, ASJ 3, 1981, p. 81-82.
34. No 7 of Appendix.
35. L. Oppenheim (op. cit. p. 77) reads according to NY 120 (=Eames G 34) Nin-lugal-^{gis}gigir, and takes her as a separate person, but in STA 16 the sign dam is written on the same line as both previous names, and two separate names are never written on the same line.
36. I. J. Gelb, Household and Family in Early Mesopotamia, State and Temple Economy in Ancient Near East (ed. by E. Lipinski) Leuven, 1979, I p. 60-65.
37. No 6 of Appendix.
38. 119 according to Gomi's copy, but this number of women would need much more barley than actually recorded.
39. K. Maekawa, The Erín-People in Lagash of Ur III Times, RA 70, 1976, p. 9-44; M. Sigrist, RA 73, p. 101-120.
40. G. Pettinato, Ebla, Milano, 1979, p. 142-145.

41. C. J. Gadd, Tablets from Chagar Bazar and Tall Brak, 1937-38, Iraq 7, 1940, p. 54-59 (catalogue only).
42. I. J. Gelb, Prisoners of War in Early Mesopotamia, JNES 32, 1973, p. 87-95.
43. First studied by Struve: В. В. Струве, Лагерь военнопленных женщин в Шумере III тыс. до н. э. ВДИ № 3, 1952, с. 12-25.
44. The situation was similar in the Hittite Empire (S. Alp, Die soziale Klasse der NAM.RA-Leute und ihre hethitische Bezeichnung, JKF 1, 1950-51, p. 113, 117, 119), and in Egypt (A. Bakir, Slavery in Pharaonic Egypt, Cairo, 1952, p. 110; О. Д. Берлев, Трудовое население Египта в эпоху Среднего Царства, М. 1972, с. 74-95.
45. I. J. Gelb, JNES 32, p. 90.
46. For the comparison see Chapter IV.
47. I. J. Gelb, RA 66, p. 21-32.
48. F. J. Tritsch, Minoica, p. 428.
49. It should be noticed that masculine ethnics used as personal names, such as ra-mi-ni-jo (An 209, Cn 328, 719) and a-*64-jo (Cn 1287, Fn 324, Jn 832; feminine form of this word - a-*64-ja is interpreted by Chadwich as a-swi-ja - "female slave from the country of Assuwa") are also attested at Pylos. Whatever they mean, these men probably belong to the same groups of population as women so described.
50. Such a description of women seemed so strange to Chadwick that he preferred to regard ne-wa and pa-ra-ja in TH Of 34 as description of wool (Thebes Tablets II, Supplement to Minos 4, p. 96).
51. I. J. Gelb, RA 66, p. 2, 5.
52. И. М. Дьяконов, Общественный и государственный строй... с. 22.
53. "The situation in Crete may have been slightly different, since here the women are most often described as 'women of Phaistos', 'women of Dawos' and so forth" (The Mycenaean World, p. 79).
54. See p. 53, 85.
55. Another possible restoration: e-re-[e]qe-ro-me-no - "they volunteered to row" - is less probable L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford, 1963, p. 124.

56. L. R. Palmer, ibid. p. 232.
57. ki-ri-te-wi-ja may be connected with Greek κριθή - barley, but other interpretations are possible (see M. Lindgren The People of Pylos, Uppsala, 1973, II p. 81-82). ti-nwa-si-ja/jo is usually interpreted as an ethnic derived from a place-name, since ti-nwa-si-jo ko-re-te is found in Jo 438, and this title is usually connected with a particular place-name. However, the name of koreter - Teposeu appears in On 300 in such a position as if he holds some specific office in framework of the whole province (M. Lejeune, Le damos dans la société mycénienne, REG 78, 1965, p. 18-21 = MPM III, 1972, p. 135-154).
58. Apia₂ro is koreter according to On 300, Duni₂jo duma is found in the same text, Aukewa is damokoro according to Ta 711, Aeriqota is mentioned in Aq 218 as responsible "to lead men", Tataro and Pereqota pada₂jeu are the land-holders (tereta) in the E series, Akeo is one of the "collectors" of sheep in the Cc, Cn series, Qara₂ appears (in the dative - qa-ra₂-te) as a head of several professional groups in An 7, 39).
59. ra-wa-ke-ja is probably derived from the title ra-wa-ke-ta (in this case it should be read ra-wa-ke-(si)-ja) - ῥαῦρετάς (see: M. Lindgren, op. cit. II p. 134-136), qa-si-re-wi-ja - from the title qa-si-re-u - βασιλεύς (ibid. II p. 126-130) and the etymology of ke-do-si-ja is unknown (see: J. T. Melena, Studies on Some Mycenaean Inscriptions from Knossos Dealing with Textiles, Minos Supplement 5, 1975, p. 78-81).
60. M. Lindgren, op. cit. II p. 100.
61. ibid. II p. 141.
62. Documents², p. 421.
63. On Marineu see: J. Chadwick, Thebes Tablets II, p. 93; J. T. Hooker, The Language of the Thebes Of-Tablets, Minos 16, 1977, p. 176; A. M. Jasink Ticchioni, Contributi micenei, SMEA 21, 1980, p. 207; J. T. Killen, CM, p. 176-178; J. L. Melena, Coriander on the Knossos Tablets, Minos, 15, 1976, p. 138-139; L. R. Palmer, Some New Minoan-Mycenaean Gods, Innsbruck, 1981, p. 8.
64. M. Lindgren, op. cit. II p. 27-28.

65. J. L. Melena, Minos Supplement 5, p. 17.
66. A. Morpurgo, Mycenaeae Graecitatis Lexicon, Rome, 1963, p. 262.
67. J. T. Killen, The Knossos o-pi Tablets, Atti Roma, 1968, p. 636-643; A. Morpurgo-Davies, Mycenaean and Greek Prepositions: o-pi, e-pi etc., Res Mycenaeae, 1983, p. 287-310.
68. F. W. Householder, pa-ro and Mycenaean Cases, Glotta 38, 1959, p. 1-10.
69. Documents², p. 170.
70. M. Lang, The Palace of Nestor Excavations of 1957, Part II, AJA 62, 1958, p. 189-191.
71. M. Lindgren, op. cit. II p. 144-145.
72. ibid. II p. 19-20.
73. a-qi-ja-i (ibid. p. 23), ki-u-ro-i (ibid. p. 83), po-ge-wi-ja-i (ibid. p. 121), do-ka-ma-i (ibid. p. 39).
74. a₃-te-re (KN B 101, ibid. II p. 29-30), ko-to-ne-we (PY Ae 995, ibid. II p. 87-88), ko-wi-ro-wo-ko (KN B 101, ibid. Appendix I p. 207), pe-re-ke-we (PY Ae 574, 765; ibid. II p. 115-116), tu-ra-te-we (KN B 755, ibid. II p. 148).
75. ibid. II p. 84-86, 122-123.
76. A. Morpurgo, Lexicon, p. 9.
77. M. Lindgren, op. cit. II p. 118-119.
78. H. Mühlestein, Die Oka-Tafeln von Pylos, Ein mykenischer Schiffskatalog? Basel, 1956, p. 36; L. R. Palmer, Military Arrangements for the Defence of Pylos, Minos 4, 1956, p. 122 n. 2; L. Deroy, Les leveurs d'impôts dans le royaume mycénien de Pylos, Rome, 1968, p. 33-36.
79. i-wa-so (M. Lindgren, op. cit. II p. 58-59), ke-ki-de (ibid. II p. 75-76), ko-ro-ku-ra-i-jo (ibid. II p. 86), o-ka-ra₃ (ibid. II p. 102), u-ru-pi-ja-jo (ibid. II p. 149-150).
80. Derived from the title ke-ro-te (ῥέροντες ?), see: M. Lindgren, op. cit. II p. 78-79. There is however possibility that Pylian ke-ro-si-ja and Knossian ke-do-si-ja are variants of the same word. In this case the r/d alternation points to the pre-Greek Minoan language where this alternation is attested.

81. M. Lindgren, op. cit. II p. 160.
82. J. L. Melena, Minos Supplement 5, 1975, p. 33-35.
83. The lists of officials (KN V 865 and PY An 192) and the totals from Knossos (class II.4) are not included, since their purpose is unknown.
84. L. R. Palmer, Notes on the Personnel of the o-ka Tableta (Pylos 1952), Eranos 54, 1956, p. 3-4.
85. L. R. Palmer, Achaean and Indo-Europeans, Oxford, 1955; Military Arrangements for the Defence of Pylos, Minos 4, 1956, p. 120; J. Chadwick, The Mycenaean World, p. 178-179.
86. J. Chadwick, op. cit. p. 175-177; M. Lejeune, La civilisation mycénienne et la guerre, MPM III, p. 61-69.
87. L. Deroy, Les leveurs d'impôts ...
88. S. Hiller, Studien zur Geographie des Reiches um Pylos nach den mykenischen und homerischen Texten, Wien, 1972, p. 35-52; R. Schmitt-Brandt, Die OKA-Tafeln in neuer Sicht, SMEA 7, 1968, p. 69-96; D. Was, The Kingdom of Pylos, its Topography and Defence, Anatolica 3, 1969/70, p. 147-176.
89. H. Mühlestein, Die Oka-Tafeln von Pylos; J. Kerschesteiner, Pylos-tafeln und homerischer Schiffskatalog ?, MSS 9, 1956, p. 34.
90. F. Bader, Particules d'énumération mycéniennes, Minos 15, 1974, p. 164-194; M. Lejeune, Pré-mycénien et proto-mycénien, BSL 71, 1976, p. 199-202; J. T. Hooker, Non-Greek Elements in the Linear B Tablets, IF 73, 1968, p. 72-80.
91. For this word see: J.-P. Olivier, En marge d'une nouvelle édition des tablettes de Mycènes, Kadmos 8, 1969, p. 49; L. A. Stella, La civiltà micenea nei documenti contemporanei, Roma, 1965, p. 185; J. L. Melena, Minos Supplement 5, p. 37-40.
92. For this text see: J. T. Hooker, Linear B, An Introduction, Bristol, 1980, p. 107-112.
93. M. Lindgren, op. cit. II p. 105-106.
94. For the problem of epi-/opi- alternation see: M. Gérard, L'emploi et le sens d'opi en mycénien, in L. Deroy, op. cit. p. 89-109; J. T. Killen, Atti Roma, p. 636-643; A. Morpurgo-Davies, Res Mycenaee, p. 287-310.

95. M. Lindgren, op. cit. II p. 44.
96. o-pi-a₂-ra is usually interpreted as ἑφαλα - "those parts near the sea" i. e. "the coastal regions" in the accusative plural neutrum. See: O. Panagl, Mykenisch OPIA₂RA = elisch ἑπίαιον ?, SMEA 13, 1971, p. 156-165; for the interpretation of a₂-ri-e see: J.-L. Perpillou, La tablette PY An 724 et la flotte pylienne, Minos 9, 1968.
97. On this tablet see: C. J. Ruijgh, Observations sur la tablette Ub 1318 de Pylos, Lingua 16, 1966, p. 130-152.
98. au-ke-i-ja-te-we, mu-te-we (personal names), ka-tu-re-wi-ja-i, a-re-se-si, ti-ri-si ze-u-ke-si, pe-di-ro-i ("objects").
99. me-ti-ja-no (PN), e-ma-ta, we-ru-ma-ta (neut. pl.).
100. wo-di-je-ja, a-pe-i-ja (female names), o-ka, o-pi-de-so-mo, to-pa (?).
101. "to pull, to draw" - P. Wathlet, Les verbes ἑρῶω et ἑρῶμαι en mycénien et dans les formules de l'épopée grecque, Studia Mycenea, Brno, 1966, p. 105-111; "to protect, to supervise" - F. Bader, Vocabulaire et idéologie tripartite des Indo-Européens: La racine *swer - "veiller sur" en Grec, BSL 66, 1977, p. 148-204.
102. This is the main weakness of Deroy's "tax-collecting" theory: it is hardly possible to imagine the "army" of 800 tax-collectors organised in military-looking fashion in any society other than our own.
103. M. Lindgren, op. cit. II p. 99-100.
104. This word is usually regarded as some people's collective designation (M. Lindgren, op. cit. II p. 110). but at Thebes it (and the variant o-*35-ta) was found in the position of the personal name (Of 33 o-*34-ta-o do-de, Ug 3 [pe-pi-te]-me-no-jo o-*35-ta).
105. T. B. L. Webster, From Mycenae to Homer, London, 1958, p. 21 n. 6.
106. D. J. Wiseman, The Alalakh Tablets, 1953, p. 71. The texts were published in cuneiform copies in D. J. Wiseman, Supplementary Alalakh Tablets, JCS 8, 1954, p. 11-12.
107. J. Bottéro, Le problème des hapiru (CSA 12), 1954, p. 32-42.
108. M. Greenberg, The Hab/piru (AOS 39), 1955, p. 19-22, 64-65.
109. PRU VI 93.131, 141, UT 113, 321. M. Heltzer, The Internal Organization of the Kingdom of Ugarit, Wiesbaden, 1982, p. 104-105, 109.

Texts of this type are parallel to S series from Pylos, Knossos and Tiryns.

110. J. M. Sasson, The Military Establishments at Mari (Studia Pohl 3), 1969, p. 7-22.
111. Published by E. von Schuler in Die Kaskäer, Berlin, 1965, p. 140-145.
112. See p. 3-6.
113. A. Deimel, ŠL II 3, p. 758.
114. CAD XVI, p. 45-55; W. von Sohden, AHw, 1414-1415.
115. ibidem. The real soldiers in Sumerian economic texts are usually specified as erín-ugnim (MVN III 257, VII 130). K. Maekawa translates erín-giš-gíd-da as "armed with long lances (?)", but in CT IX 21348 they are dispatched to transport reeds (RA 70, p. 18).
116. The main studies of erín in Ur III documents are: I. J. Gelb, JNES 32, p. 70-98; K. Maekawa, RA 70, p. 9-44; M. Sigrist, RA 74, p. 101-120.
117. K. Maekawa, op. cit. p. 16.
118. CT X 14612, HLC II 112, RTC 398.
119. MVN VI 37, IX 147.
120. MVN IV 25, VI 216, 279, 353, 362, 387, VII 144, 317, 442, TuT 139, UET III 1161, BM 14633 (will be published by K. Maekawa in forthcoming ASJ).
121. M. Fransos, L'Archivio di Addamu, Oriens Antiquus 16, 1977 p. 133-157.
122. S. T. Kang, Sumerian Economic Texts from the Drehem Archive, 1972, p. 257-260.
123. A. Uchitel, ASJ 6, p. 81 (Table III).
124. MVN VI 305, VII 418, NAT 450, BM 13661, 15406.
125. No 8 of Appendix.
126. Other records of the work on this field are CT VII 13163 and BM 13110 (No 9 of Appendix). For other references on En-nu-lum-ma field see: G. Pettinato, Untersuchungen zur Neusumerischen Landwirtschaft, Napoli, 1967, I p. 208 (No 296).
127. E. Sollberger, The Business and Administrative Correspondence under the Kings of Ur (TCS I), 1966, p. 112 (No 167).

128. Дж. М. Шарашенидзе, Энгары древней Месопотамии, ВДИ №4, 1984, с. 98-114.
129. LD II 14, 107; Mar. Mast. D 60 (p. 343); Sh. S. 16. О. Д. Берлев, Трудовое население Египта..., с. 8-9.
130. See n. 80 and Chapter V.
131. For za-mi-jo see n. 81, for pi-we-ri-si - M. Lindgren, op. cit. II p. 117-118, for e-ro-pa-ke-ja - n. 91, for a-ke-ti-ri-ja-i - M. Lindgren, op. cit. II p. 17-18.
132. For N series see: E. D. Foster, The Flax Impost at Pylos and Mycenaean Landholding, Minos 17, 1981, p. 67-121.
133. Documents², p. 470.
134. M. Lindgren, op. cit. II p. 93-94.
135. It could be the collective designation of all five groups of people listed in lines 3-7, or the place-name.
136. Documents², p. 206.
137. L. R. Palmer, The Interpretation ... p. 176. The real sacrifices, however, are recorded at Pylos (Ur 6, 219, 718, 853) according to a different formula, which always includes the name of the deity.
138. The meaning of the word e-ke-jo-te is unknown, see: M. Lindgren, op. cit. II p. 18-19.
139. The direction of the movement of the commodities (*171) is uncertain: a-ke-re-se could be the aorist of ἄρ᾽εω - "to take", the future of ἄρ᾽είρω - "to collect", but the past tense is preferable, since the alternation of the positive and negative forms of the verb shows that it is the record of the results of some inspection, rather than the estimated "norm". For entirely different interpretation of this text, see: M. S. Ruiperez, Une charte royale de partage des terres à Pylos, Minos 4, 1956, p. 146-164.
140. Only if the word *34-te really means "brother" (pra-te); C. Gallavotti, Le origini micenee dell'istituto fraterico, PP 16, 1961, p. 20-39.
141. J. L. Melena, Ku-pa-ro en las tablillas de Cnoso, Emerita 42, 1974, p. 332-333.
142. I fail to see any reason for "deification" of all the horses mentioned at Pylos, for this view, see: L. R. Palmer, Some New

Minoan-Mycenaean Gods, p. 14-15.

143. M. Lejeune, PP 15, p. 5-19 (= MPM II, p. 227-239).
144. PSD II p. 65-66.
145. See n. 28.
146. K. Maekawa, RA 70, p. 19-36.
147. It is noticeable that the ideogram *171 appears only on Aq 64.
148. The principal studies of this title are: S. Deger-Jalkotzy, E-QE-TA; Zur Rolle des Gefolgschaftswesen in der Sozialstruktur mykenischer Reiche, Vienna, 1978; N van Brock, Notes mycéniennes, RP 34, 1960, p. 222-225; M. Lindgren, op. cit. II p. 47-48; G. Pugliese Carratelli, Equeta, Minoica, 1958, p. 319-326; A. M. Jasink Tichioni, L'e-qe-ta nei testi micenei, SMEA 17, 1976, p. 85-92.
149. S. Deger-Jalkotzy, op. cit.
150. J. L. Melena, Minos Supplement 5, p. 46.
151. M. Lindgren, op. cit. I p. 23-25.
152. Found as a personal name on PY An 654, Es 644, 649, 650. A. Morpurgo, Lexicon, p. 15, 34.
153. apud J. L. Melena, Minos Supplement 5, p. 34-35.
154. Three me-ta-ki-ti-ta are added. See: J. T. Killen, PY An 1, Minos 18, 1983, p. 74-75.
155. This is the total of all the persons in the text, since all of them are supposed to be at Roowa, according to the heading.
156. One ki-ti-ta is added according to the principle of An 610 (see n. 154).
157. All the workers in this text are supposed to be tailors, though the word ra-pte (in the singular) appears only in the heading.
158. M. Heltzer, The Rural Community in Ancient Ugarit, Wiesbaden, 1976, p. 7-30.
159. M. Heltzer, The Internal Organization ..., p. 17-18.
160. ibid. p. 115-121.
161. For the comparison, see: J. T. Killen, Minos 18, p. 72.
162. M. Heltzer, The Rural Community ..., Table No 2 (grain) p. 36-38, Table No 3 (wine) p. 41.
163. J. Chadwich, The Two Provinces of Pylos, Minos 7, 1963, p. 129-141.

164. J.-P. Olivier, Une loi fiscale mycénienne, BCH 98, 1974, p. 23-35.
165. The number is given according to Ac 1272, for the possible joint with Ac 1273, see: E. L. Bennett, J.-P. Olivier, The Pylos Tablets Transcribed, Rome, 1973, I p. 32.
166. M. Heltzer, The Internal Organization ..., p. 3-125.
167. For the "household theory", see: I. J. Gelb, Household and Family in Ancient Mesopotamia, State and Temple Economy ..., I p. 1-24.
168. The order of the professional groups here is restored according to Fn 1427.
169. M. Lindgren, op. cit. II p. 117.
170. ibid. II p. 113.
171. A list of more eight names follows on the reverse. Their connection with the "household" is uncertain.
172. D. Loding, A Craft Archive from Ur, University of Pennsylvania PhD, 1974, p. 197-203.
173. This expression seems to be parallel to the Mycenaean ta-ra-si-ja (PY Jn series, KN Lc 535, 536, Le 642, So 4442), especially in KN Lc 535 where this word ("allocation"?) is opposed to ke-ri-mi-ja ("ergasterium"?) in the textile context.
174. In UET III 1482 (19/2 Ibbsi-Sin 15) this group is said to be "released for the harvest" (buru₁₄-še šu-bar-ra-me-še), which suggests that these craftsmen had their own plots of land.
175. The meaning is unknown, see; D. Loding, op. cit. p. 228-229.
176. They are subdivided into two teams under two supervisors: Ha-ba-ad and Lugal-hé-gál.
177. J.-P. Olivier, A propos d'une "liste" de desservants de sanctuaire dans les documents en linéaire B de Pylos, Bruxelles, 1960.
178. For the problem of the appearance of the same names in a similar position in different archives, see: J. T. Killen, CM, p. 176-179; L. R. Palmer, Some New Minoan-Mycenaean Gods. See also n. 4 and 63.
179. И. А. Стучевский, Зависимое население древнего Египта, М. 1966, с. 50-51.
180. This ideogram of unknown reading is relatively rarely used, normally

the reasons for absence are given: "released" (ama-ar-gi₄ or šu-bar), "fugitive" (zah), "sick" (tu-ra), or "dead" (ug₆).

181. M. Heltzer, The Rural Community ..., p. 52-57.

III CULTIC PERSONNEL

(ration lists)

There is an interesting discrepancy between the archaeological and the documentary evidence concerning the so-called "temple economy" in Mycenaean Greece: no construction which can be identified as a "temple" has so far been discovered in Mainland Greece of this period¹, but, on the other hand, several Linear B documents from Pylos and Mycenae can be identified with high degree of certainty as lists of "cultic personnel".

The Pylian text Fn 187 can provide us with a good starting point:

1. a-pi-te-ja	HORD	[2]	NI	2
2. po-si-da-i-jo-de	HORD	[T1]	NI	T1
3. ka-ru-ke	HORD	[]	FAR	
4. pa-ki-ja-na-de	HORD	T1 []	NI	T1
5. ka-ru-ke	HORD	T1 V3	NI	T1 V3
6. de-do-wa-re-we	HORD	T1		
7. ku-re-na-ze-ja	HORD	T2	NI	T2
8. u-po-jo-po-ti-ni-ja	HORD	T5	NI	T4
9. o-pi-tu-ra-jo	HORD	T3		
10. au-to-*34-ta-ra	HORD	T1		
11. a-ma-tu-na	HORD	T1		
12. te-qi-ri-jo-ne	HORD	V3		
13. u-do-no-o-i	HORD	T3		
14. po-te-re-we	HORD	T4	NI	T4
15. a-ke-ti-ri-ja-i	HORD	T1 V3		
16. ka-ru-ke	HORD	T1 V3		
17. i-so-e-ko	HORD	T2		
18. po-si-da-i-je-u-si	HORD	T1 V3		
19. *34-ka-ja	HORD	T1 V3	NI	[T1 V3]
20. a-ro-je	[HORD]	V3		
21. ka-ru-ke	HORD	T1 V3		

This text belongs to the category of "ration lists" dealing with the distribution of barley (HORD), sometimes with addition of figs (NI) or flour (FAR), to large groups of personnel. The recipients are specified by their names, occupations and place-names in the dative singular (ka-ru-ke, de-do-wa-re-we, te-qi-ri-jo-ne, po-te-re-we), plural (u-do-no-o-i, a-ke-ti-ri-ja-i, po-si-da-i-je-u-si), or allative (po-si-da-i-jo-de, pa-ki-ja-na-de). Despite this distinction between singular and plural, it seems that most of the recipients listed in the singular received the rations for groups of people, since, as was shown by Palmer², all rations, if calculated in V-units, are divisible into three, which probably means that 3V was the basic ration for one man in this group of personnel.

The structure of this text was elucidated by Margaret Lindgren³, who has demonstrated that the recipients of the rations are divided into four groups marked by the presence of one "herald" - ka-ru-ke (κῆρυξ). The best candidates for the headings of these groups, according to her analysis, are two place-names in the allative (po-si-da-i-jo-de and pa-ki-ja-na-de) in lines two and four, u-po-jo-po-ti-ni-ja which is a combination of the place-name (u-po-jo) with the title po-ti-ni-ja (πότνια - "the Lady") in line eight, and the derivative in -eus from the name of the god Poseidon (po-si-da-i-je-u-si) in line eighteen.

Since the "Lady of Upjo" is found in this text in the same position as the two derivatives from the divine name Poseidon (po-si-da-i-jo-de and po-si-da-i-je-u-si) it can be assumed that this is a name or an epithet of a goddess rather than the title of some local "princess"⁴. Thus, three of the four "heads" of groups appear to have a cultic significance, and as for the fourth one - pa-ki-ja-na-de - this is the well-attested place-name Pakijana - one of the major administrative centers of the Pylian Hither Province and probably an important religious center as well⁵. The conclusion which follows from this analysis is that the "heads" of the groups are the names of the four "temples" or at least "shrines", and each one of them

is followed by the list of its personnel.

PY Fn 187 is not the only example of the text where Poseidon, "the Lady", or other gods are followed by the list of names or occupations. The group of 13 tablets belonging to the Pylian Es series⁶ records the donations (do-so-mo) of grain (GRA) given by 13 men to Poseidon and three other recipients. Each table comprises the formula:

1. PN(gen.) po-se-da-o-ne do-so-mo GRA x
2. *34-ke-te-si do-so-mo GRA y
3. we-da-ne-we do-so-mo GRA y
4. di-wi-je-we do-so-mo GRA y

The last two recipients appear under their personal names in the dative singular, and both of them are attested Pylian officials: Wedaneu - one of the "collectors" of sheep and goats in the Cn series⁷, and Diwijeu whose title is egeta according to An 656 or ereuter according to Cn 3⁸. The second recipient is the group of personnel, since the word *34-ke-te-si appears in the dative plural and it is probably an occupational term of unknown meaning⁹. Despite this difference in the number of recipients all of them receive the same amount of grain: 9T 3V.

Another record of the donation to Poseidon from four donors - PY Un 718¹⁰ has a heading:

1. sa-ra-pe-da po-se-da-o-ni do-so-mo
2. o-wi-de-ta-i do-so-mo ...

Sarapeda is probably a place-name¹¹ and Poseidon as a recipient of the donation is again accompanied by some obscure word in the dative plural (o-wi-de-ta-i) which is probably, as in the previous example, an occupational term¹².

"The Lady" (po-ti-ni-ja) is found in a similar position in several texts from Pylos, Mycenae and Thebes. In PY Vn 48.3-7 the "Lady of Erewijo" (e-re-wi-jo-po-ti-ni-ja) is followed by the list of personnel:

3. ... e-re-wi-jo-po-ti-ni-ja 1
4. []-ra-si-ne-wi-ja 1 ki-wo-na-de 1
5. []-se-ja 1 tu-ra-te-u-si 2
6. [] wo-no-wa-ti-si 2
7. []-ta 6 ka-ra-wi-po-ro 5

Which commodity is distributed here it is impossible to tell, since there are no ideograms in this text and its heading is broken. Some of the recipients again appear in the plural and others in the singular. ki-wo-na-de could be either the dative singular of a personal name or a place-name in the allative, tu-ra-te-u-si and wo-no-wa-ti-si are both in the dative plural, the first word being an occupational term derived from the word θύρα - "door"¹³ and the second - from the stem οἶνος - "wine"¹⁴, ka-ra-wi-po-ro is the dative singular of the well-attested Pylian title κλειφόρος - "keybearer"¹⁵.

The word po-ti-ni-ja is found in a similar position as the head of a group of personnel in the group of five texts from Mycenae which constitute the Oi series. This is the only group of texts found at Mycenae inside the citadel and it records the distribution of some unidentified commodity represented by ideogram *190 which appears also on the clay-sealing Wt 700 found together with the Oi tablets. The distribution of this commodity to the five groups of personnel is shown on table XIX.

In Oi 701 the "head" of the group appears in the form si-to-po-ti-ni-ja - "the Lady of the grain". All other recipients are in the dative plural. In Oi 702 the word po-ro-po-i is written in the defective form po-po-i and in Oi 701 the word ko-o-ke-ne-i is preceded by the name of the donor: no-pu₂-ta do-ke-ko-o-ke-ne - "Nopu₂ gave to K". All these words seem to be occupational terms, but only

Table XIX

text No	701	702	703	704	706
po-ti-ni-ja	[]	3		15	
po-ro-po-i	10	5			
ka-na-pe-u-si	6			6	
ko-o-ke-ne-i	5		5	[]	
ku-wa-no-wo-ko-i	2	2	2	[]	2

ka-na-pe-u-si ("fullers") is attested elsewhere¹⁷ and ku-wa-no-wo-ko-i can be analysed as "makers of $\kappa\acute{o}\alpha\nu\omicron\varsigma$ " (whatever this means)¹⁸.

It is possible that the rations to all five groups of personnel were summarised in MY Ue 661 found in the "private archive" (West House) outside the citadel:

1. jo-po-ro-te-ke *190 100 *155+NI 15
2. *248 5

"Thus, he put forward 100 units of *190, 15 units of *155+NI and 5 units of *248". The ideogram *155+NI represents the plate (*155) with the figs (NI) and *248 also includes the sign for figs in the combination with some uncertain drawing. It is noticeable that the numbers of all three commodities are divisible by five.

At Thebes "the Lady" is found in the expression po-ti-ni-ja wo-ko-de - "to the house of the Lady" in Cf 36, which is the only Linear B reference to the "shrine"¹⁹. As in the previous examples, the Lady is accompanied by one or more members of her personnel, in this case a-ke-ti-ra₂, which is the well-attested female occupational term usually found in connection with the textile industry²⁰. But unlike the other texts of the type discussed, only the word a-ke-ti-ra₂ indicates the recipient of wool (LANA), while the "house of the Lady"

itself does not receive any separate ration.

The identification of the "heads" of the personnel found in three other Pylian texts: Un 219, Xa 1419 and Gn 428 is much less certain. Nevertheless, the personnel itself can be identified as "cultic" on the basis of the comparison between occupational terms which appear in these texts and those found in the texts previously discussed.

Un 219 is a record of the distribution of 13 unidentified commodities to 18 recipients. As in Fn 187, this text is opened by personal name standing outside the other groups of recipients: a-ke-ra-ne, which is probably the variant spelling (in the dative) of the name Ekera₂wo²¹ - well-known Pylian official and one of the donors of the offerings to Poseidon in Un 718. This name is followed by the section:

2. pa-de-we 0 1 pa-de-we 0 1
3. ka-ru-ke PE 2 KA 1 0 6
4. te-qi-jo-ne 0 1 a-ke-ti-ri-ja-i KA 1

The identification of pa-de-we is uncertain - it could be connected with the word pa-de which appears among the other gods in the lists of offerings at Knossos (Fp 1, 48), but all the other recipients in the following group are found in Fn 187 among the personnel of u-po-jo-po-ti-ni-ja (te-qi-jo-ne being variant spelling of te-qi-ri-jo-ne).

Xa 1419 is a fragment, the right-hand part of which containing the ideograms and numerals is broken:

- Obv. 1. d-wo-nu-so [
2. tu-ni-jo [
- Rev. 1. i-pe-ne-o [
2. wo-no-wa-ti-si [

The identification of di-wo-nu-so as Dionysos, despite the striking similarity of the spelling, is disputed²², but the following list of recipients can be identified as a list of the "cultic personnel" because of the presence of the word wo-no-wa-ti-si which is found in Vn 48.

Gn 428 records the distribution of wine (VIN):

1. [] [
2. []-jo [
3. ka-ra-te-mi-de VIN 1 S2 [
4. tu-ra-te-u-si VIN S1
5. o-ro-ke-we S1 i-do-me-ni-jo S1
6. ki-jo-ne-u-si S1

The heading of this text is broken, but again the presence of the word tu-ra-te-u-si, found in Vn 48, connects it with the texts of the type discussed.

Now, we can summarise all the information about the cultic personnel found at Pylos, Mycenae and Thebes.

Poseidon:

<u>posidaijode</u>	<u>posidaijeusi</u>	<u>posedaone</u>	<u>posedaoni</u>
(PY Fn 187)	(PY Fn 187)	(PY Es series)	(PY Un 718)
karuke	*34-keja	*34-ketesi	owidetai
	aroje	wedanewe	
	karuke	diwijewe	

Potnia:

<u>upojo-potinija</u>	<u>erewijo-potinija</u>	<u>(sito)-potinija</u>	<u>potinija wokode</u>
(PY Fn 187)	(PY Vn 48)	(MY Oi series)	(TH Of 36)

opiturajo	[]-rasinewija	poropoi	aketira ₂
auto-*34-tara	kiwonade	kanapeusi	
amatuna	[]-seja	kookenei	
teqirijone	turateusi	kuwanowokoi	
udonooi	wonowatisi		
poterewe	[]-ta		
aketirijai	karawiporo		
karuke			
isoeko			

others:

<u>pakijanade</u>	<u>padewe</u>	<u>diwonuso</u>	<u>[]</u>
(PY Fn 187)	(PY Un 219)	(PY Xa 1419)	(PY Gn 428)
karuke	karuke	tunijo	karatemide
dedowarewe	teqijone	ipeneo	turateusi
kurenazeja	aketirijai	wonowatisi	orokewe
			idomenijo
			kijoneusi

As can be seen from this summary, the lists of cultic personnel usually consist of personal names and occupational terms, some of which are found in several lists and thus can be positively identified as "cultic": ka-ru-ke ("herald") is found five times, a-ke-ti-ri-ja-i (or a-ke-ti-ra₂) - three times, tu-ra-te-u-si and wo-no-wa-ti-si - twice each of them. The word o-pi-tu-ra-jo can be added, since, like tu-ra-te-u-si it is probably derived from the word for door (θύρα) and both words may have a very similar meaning ("porter"?).²³

It seems clear that this personnel attached to the gods and their "houses" represents the members of the cultic households. But the question remains, how can this picture be reconciled with the absence of the temples which in contemporary cultures were the normal location of such households?

Lists of temple-personnel are of course well-known in the Ancient Near East: P. Berlin 10048 for Egypt (XII Dynasty)²⁴, HSS IV 4 for Sumer (III Dynasty of Ur)²⁵, and KUB XXXVIII 12 for the Hittite Empire (Tudhalia IV)²⁶ can be quoted as the best examples. However, the most exact parallel to the Mycenaean lists of cultic personnel, and especially to PY Fn 187, is provided by Luwian hieroglyphic Kululu lead strip No 2 from the post-imperial Neo-Hittite period (IX-VII cent. B.C.)²⁷.

This text records the distribution of sheep (OVIS ha-wi-na) to four groups of recipients marked by the presence of "statues" (ta-ru-ti) in each group. All the recipients appear in the text in the dative singular (-ia or -i endings) or plural (-za ending). Those of them who are listed after the "statues" are either named or specified only by their professions. The named persons are often further qualified by professional or geographical designations.

The most noticeable feature of this text is that the "statues" themselves appear as the recipients of sheep together with the personnel attached to them, like the gods and other "heads of households" in the Mycenaean texts discussed. In fact the similarities between this text and some Mycenaean ones go even beyond this point: the text is opened by two personal names which stand outside the other groups of personnel, as happens in Fn 187 and Un 219; the donors of the offerings are mentioned only occasionally (Mawahis to Nis, Lalis to Parsatas), as in the case of Oi series from Mycenae.

Unfortunately, only a few professional qualification mentioned in this text are comprehensible: tarpala - "substitute", watara - "cup-bearer", hurnala - "hunter". It is clear however that the recipients differ in their relative social position: all unnamed persons and some named ones (Kulis, Tumisis, Kwisais, Tutus, Paluzis) get ten sheep each, while others (Nunus uriyali, Mamis, Nunus watara, Satanus uzakali, Atiwaramis sarkunala) receive much more - from 20 to 200 sheep each.

Table XX (Kululu lead strip No 2)

sheep	recipient	qualifications
32	I _{ni} -ia	
68	I _{pá} +ra/i-sà-ta-ia	ku-ki-sà-ta-za REL-za wa/i-si-i
140	7 ta-ru-ti	á-sà-ha-ia-la+ra/i-ti(URBS)
40	I _{nu} -nu-ia	MAGNUS+RA/I-ia-li
30	3 tara/i-pa-la-za	
30	I _{ku} -li-ia, I _{tu} -mi-si-ia,	sù-na-wa/i+ra/i-za
	I _{tu} -tu-ia	
20	I _{ma} -mi-ia	ta-ma-ru-na
20	I _{nu} -nu-ia	wa/i-tara/i
20	I _{sa} -ta-nu-ia	u-za-ka-li
40	4 la-hi-na-la-za	
20	2 hu-hu+ra/i-pa+ra/i-ia-za	
100	5 ta-ru-ti-i	mu+ra/i-ti-ia-sá(URBS)
20	I _{REL} -sa-i-ia, I _{pa} -lá/í/u-zi-ia	sù-na-wa/i-tà-za(URBS)
100	5 ta-ru-ti	ti-wa/i+ra/i-li-ia(URBS)
20	2 hu _x +ra/i-na-la-za	
20	2 la-hi-na-la-za	
141	3 ta-ru-tà-za	á-ha-ti-ku-ku+ra/i-za(URBS)
15	ta-REL+RA/I-ta-'	á-ru-sa-li-ia(URBS)
14	(?)	sa ₅ +ra/i-ku-na
200	I _á -ti-wa/i+ra/i-mi-ia	sa ₅ +ra/i-ku-na-la

To clarify the relative position of the different groups of personnel in this text we have to turn to the Hittite cuneiform list of cultic personnel found in KUB XXXVIII 12. The use of the Hittite cuneiform text for this purpose is justified since the Neo-Hittite kingdoms of the I millennium B.C. continued many traditions of the Empire period. Thus, in respect of the cultic personnel, the same term written hieroglyphically in the Luwian inscription Karkemiš A3

as (*273)wa/i+ra/i-pa-si DOMINUS-ia-zi-i ("lords of skill" in the accusative plural) is found in the cuneiform text KUB XIII 8²⁸ from the reign of Arnuwanda I, where it is written in Akkadian as lú.meš BE-EL QA-TI (both texts record the donation of personnel to the temples). On the other hand, KUB XXXVIII 12 is probably based upon the hieroglyphic prototype, as it is stated repeatedly in the text itself: giš HUR pi-tar-ha-i-ta tar-ra-u-wa-an (I 18, II 7-8, 22, III 24) - "provided according to the pitarhaita(?) wooden carving".

This text belongs to a large group of the so-called "cultic inventories"²⁹ composed during the great cult reform of the king Tudhaliya IV. KUB XXXVIII 12 differs from the rest of the texts of this type, as its main interest is in the recording the cultic personnel of several temples (É.DINGIR) in the city of Karahna. The personnel of the temples was divided, according to this text, into three groups:

- 1) lú hazziwitassis³⁰ - the cultic personnel proper, priests and priestesses,
- 2) lú hilammates³¹ - "men of the gate-house", listed by professions,
- 3) NAM.RA - "deportees", listed by "houses" (É^{hi.a} i. e. peasants' households)³².

The distribution of the personnel by professions is shown on table XXI, and it follows from this table that, although some professions of lú hilammates personnel are of cultic significance (lú GALA, lú MUSEN. DÜ, lú GUDÜ, lú HAL), most of the members of this group served the "temporal" needs of the temple-complex (scribes, cooks, brewers, bakers, porters, sweepers, and so on), while the NAM.RA "deportees" were probably the dependent peasants cultivating the temple-lands.

Two important observations can be made on the basis of the comparison between the Mycenaean material and the last two texts:

1. There is no need to assume the existence of actual temples if we have the textual reference to the cultic personnel. As we have seen, in the Kululu lead strip No 2 such personnel is grouped

Table XXI (KUB XXXVIII 12)

temples	^a LAMA and the Storm-god	the Storm-god of the Heaven and the Sun-goddess of city Arinna	[]
lú <u>hazziwitassis</u>	19	[]	[]
lú SANGA ("temple-steward")	3	1	
mí AMA.DINGIR ("mother of the god")	1		
SAL ^{meš} [] ("women of []")	15		
lú DINGIR ("god-man")			1
lú <u>hilammates</u>	26	6 ¹	[]
lú.giš ⁸ SÚKUR ("spearman")	1		
lú ⁸ L.DU ⁸ ("porter")	1		
lú.giš ⁸ BANSUR ("tableman")	1		
lú GALA ("lamentation priest")	1		
lú <u>palwatallas</u> ("clacker")	1		
lú <u>arkamiyalas</u> ("musician")	1		
lú MUŠEN.DU ("augur")	1		
lú.dug ⁵ GA ⁵ .BUR.NA ("potter")	1		
lú GUDU ("anointed man")	1		
lú DUB.SAR ("scribe")	1	1	
lú DUB.SAR.GIŠ ("scribe on wood")	1		
lú HAL ("diviner")	1	1	
lú NAR ("singer")	2	1	
lú MUHALDIM ("cook")	3		
lú SAGI ("cup-bearer")	2		
lú KURUN.NA ("brewer")	1	1	
lú NINDA.DU.DU ("baker")	2	1	
lú A ŠA KUŠ.LAL ("water-carrier")	1		
lú KISAL.LUH ("sweeper")	2		
lú <u>EPIŠ</u> BA.BA.ZA ("porridge-maker")	1		
NAM.RA (E ^{hi.a})	(8)	32 (3)	7 (1)

around the "statues", probably wooden ones, since the Luwian word for statue - tarusa is derived from the root taru - "wood".

There is at least a possibility that a reference to a cultic statue is found in the Pylian archive as well. The tablet An 1281 has a heading:

1. [po] -ti-ni-ja i-qe-ja
2. [] -mo o-pi-e-de-i

The first line can be transliterated as ῥῶτινιᾱ ἰππεῖᾱ - "Lady of the horses", and the second - as ἐπὶ εἰδέῃ which can mean either "at the shrine" or "at the statue".

Even more important are the references to the land of gods which could provide the economic basis for the cultic households, whether it was marked by some visible symbol (shrine or statue) or not. In the land-survey PY Eq 36 Poseidon appears among other land-holders. In the dispute over the status of land between the priestess Erita and the "people" (da-mo) recorded in another land-survey (Eb 297/Ep 704) the priestess claims that her plot of land belongs to a god:

e-ri-ta i-je-re-ja e-ke e-u-ke-to-qe e-to-ni-jo e-ke-e te-o

"Erita the priestess holds and claims that the god holds the etonijo".

It is possible that the word e-to-ni-jo was the general term for the land of gods, since it is found in PY An 724 in the expression e-to-ni-jo e-nwa-ri-jo where the last word can be interpreted as the name of the god Enyalios which appears in the god-list KN V 52 (written there as e-nu-wa-ri-jo).

2. The named persons, such as Wedaneu, Diwijeu, Tiqirijo and others, found in the Mycenaean lists of the cultic personnel correspond

probably to the Hittite hazziwitassis - the cultic personnel proper, including the managers of the cultic "households". The unnamed persons listed by professions probably correspond to the Hittite hilammates - the ordinary workers of these "households". No correspondence to the Hittite NAM.RA is found in the Mycenaean ration lists, which can be expected, since the peasants dependent on the cultic "households" probably had their own plots of land and therefore they were not included among the recipients of rations. Such peasants were probably called in Mycenaean Greece do-e-ro ("slaves") of more prominent members of the cultic "households" or of the gods themselves. As might be expected, they are found in the land-registers as small-holders.

The unnamed "slave" of Wedaneu (we-da-ne-wo do-e-ro) appears in the land-survey Es 650 as well as in Es 703 as one of the donors of the tribute to Poseidon, Diwijeu, Wedaneu, and *34-ke-te-si (see p. 109). The slave of Kapatija the keybearer (ka-ra-wi-po-ro) appears in another land-survey Ep 539 (see p. 110) alongside two "slaves" of the priestess (i-je-re-ja do-e-ro). The "slaves of the god" (te-o-jo do-e-ro) are of course the largest group of small-holders in the Pylian land-registers, but it is impossible to say whether they were actually connected with some "cultic household" or not.

Conclusions:

1. Several ration lists from Pylos and Mycenae dealing with cultic personnel show that despite the apparent absence of temples there was a sector of the economy which can be called conventionally "temple economy" in Mycenaean Greece as in contemporary societies. Unlike Mesopotamia or Egypt however, this sector had only a marginal importance in Mycenaean Greece, since we find only a few references to the "land of gods" in the Linear B documents. On other hand, the very fact that the members of the cultic personnel received their rations from the palace suggests that the Mycenaean cultic "households" were not independent entities as were the temples on the Ancient Near East.
2. The organisation of the cultic personnel in Mycenaean Greece shows

the high degree of similarity with that of the Hittite Empire and the later Neo-Hittite kingdoms.

3. No texts comparable with the lists of the cultic personnel from Mainland Greece can be identified in the Knossian archive, which probably means that on Crete the cult was organised along different lines.

NOTES

1. E. Vermeulle, Greece in the Bronze Age, Chicago, 1964, p. 282-283.
2. L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford, 1963, p. 232.
3. M. Lindgren, The People of Pylos, Uppsala, 1973, II p. 108 n. 1.
4. u-po-jo po-ti-ni-ja is also found as a recipient of the olive-oil offerings in Fr 1225, 1236.
5. R. Guglielmino, PA-KI-JA-NE, la ieropoli di Pilo, SMEA 23, 1982, p. 141-193.
6. Es 645, 646, 647, 649, 651, 652, 653, 703, 726, 727, 728, 729.
See: A. Heubeck, Zu den pylischen Es-Tafeln, Sprache 4, 1956, p. 80-95; P. Ilievski, The Recipients of the Es Tablets, Cambridge Colloquium, 1966, p. 238-244.
7. Cn 40, 45, 254, 418, 600, 643, 655. See: M. Lindgren, op. cit. I p. 127-128, II p. 135-136; M. Petruševski, Diwijeu, Pereuronijo - Diwijewe, Wedanewe, ZA 15, 1965, p. 32.
8. See p. 77, 82; also M. Lindgren, op. cit. I p. 42-43, II p. 50-51.
9. ibid. II p. 161-162.
10. M. Lejeune, Le dossier sa-ra-pe-da du scribe 24 de Pylos, Minos 14, 1973, p. 60-76; J. Chadwick, Who Was e-ke-ra₂-wo ?, Le monde grec, 1975, p. 450-453; P. de Fidio, I dosmi pilii a Poseidon, Rome, 1977, p. 77-129.
11. For a different view, see: M. Lindgren, op. cit. II p. 153 n. 27.
12. ibid. II p. 109.
13. ibid. II p. 148.
14. ibid. II p. 157-158.
15. ibid. II p. 72-73.
16. P. Ilievski, The Linear B Ideogram *134, ZA 15, 1966, p. 271-280.
17. M. Lindgren, op. cit. II p. 71-72.
18. R. Halleux, Lapis-lazuri, azurite ou pâte de verre ? A propos de kuwano et kuwanowoko dans les tablettes mycéniennes, SMEA 9, 1969, p. 47-66.
19. Another similar expression: [ma]-ri-ne-wo wo-i-ko-de - "to the house of Marineu" is found in KN As 1519, but the interpretation

of Marineu as a god is uncertain; see n. 63 for Chapter II (p. 98).

20. M. Lindgren, op. cit. II p. 17-18.
21. ibid. I p. 46, II p. 153-155; see also n. 10.
22. G. F. Gianotti, Orfeo e Dioniso micenei, RF 100, 1972, p. 522-533;
K. Kerényi, Der Frühe Dionysos, Oslo/Bergen, 1961; M. S. Ruipérez,
The Mycenaean Name of Dionysos, Res Mycenaeae, 1983, p. 408-412.
23. M. Lindgren, op. cit. II p. 108.
24. Unpublished, translated in O. Д. Берлев, Общественные отношения
в Египте эпохи Среднего Царства, М., 1978, с. IO-II.
25. Tabulated in I. J. Gelb, Household and Family in Early Mesopotamia,
State and Temple Economy in the Ancient Near East, Leuven, 1979,
I Chart I.
26. M. Darga, Karahna şehri kült-envanteri, Istanbul, 1973.
27. My treatment of this text is based upon the copy, transliteration
and translation by J. D. Hawkins intended for publication in the
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28. H. Otten, Hethitisches Totenrituale, Berlin, 1958, p. 104.
29. E. Laroche, CTH No 501-530; C. W. Carter, Hittite Cult Inventories,
Chicago, 1962.
30. Derived from the word hazziwi - "ritual". F. Pecchioli Daddi,
Mestieri, professioni e dignità nell'Anatolia ittita, Roma, 1983,
p. 216-217.
31. Derived from the word hilammar - "gate-house". I. Singer. Hittite
hilammar and Hieroglyphic Luwian *hilana, ZA 65, 1975, p. 77;
F. Pecchioli Daddi, op. cit. p. 210-213.
32. Hittite reading: arnuwalas; see, S. Alp, Die soziale Klasse der
NAM.RA-Leute und ihre hethitische Bezeichnung, JKF 1, 1950-51,
p. 113.

IV ASSIGNMENT OF MANPOWER

All the texts discussed up to this point are records of a static situation: operation of work-teams, quotas of conscripts, composition of "households". Three very important and very difficult texts in the Pylian Archive differ from this point of view, as they record a change in the position of some men and women. These texts are An 607, 1281, and Tn 316. Each of them still resists a generally accepted interpretation, which encounters considerable linguistic difficulties.

1. An 607¹

1. me-ta-pa ke-ri-mi-ja do-qe-ja ki-ri-te-wi-ja
2. do-qe-ja do-e-ro pa-te ma-te-de ku-te-re-u-pi
3. MUL 6 do-qe-ja do-e-ra e-qe-ta-i e-e-to
4. te-re-te-we MUL 13
5. do-qe-ja do-e-ro pa-te ma-te-de di-wi-ja do-e-ra
6. MUL 3 do-qe-ja do-e-ra ma-te pa-te-de ka-ke-u
7. MUL 1 do-qe-ja do-e-ra ma-te pa-te-de ka-ke-u
8. MUL 3

The problems start with the very division of the text into sentences, as this is the only Linear B text where the ideograms (MUL) and numerals are written at the beginning of each line and not at the end, on the right-hand side of the tablet. It can be assumed, however, that the general rule of the Linear B script that the ideograms and numerals follow the preceding text written syllabically² is still valid for An 607. In other words, each sentence probably ends with the numeral, as is required, but the ideograms and numerals were transferred by the scribe to the beginning of the following line probably from lack of space at the right-hand edge of the tablet.

Another problem is the total: MUL 13 (=6+3+1+3) which is found not at the end of the text, as might be expected, but right in the middle - on line 4. This total however is written over the erased

numeral "6", which probably means that the text originally consisted of only four lines, and when lines 5-8 were added the scribe changed the total, but failed to transfer it to the end of the newly enlarged text.

In addition to these two irregularities in the arrangement of the text, the meaning of the crucial word do-ge-ja repeated six times in the text as well as the meaning of the two other words in the heading ke-ri-mi-ja and ki-ri-te-wi-ja remain unknown.

The situation is not so desperate as it seems to be. Two important points are hardly disputed by anybody:

1. The purpose of the text is described in lines 3-4 by the phrase:
... do-ge-ja do-e-ra e-ge-ta-i e-e-to te-re-te-we MUL 13 -
" ... female 'slaves' were sent to the followers to Teretewe (GN da. sg.), 13 women"³. Since the text begins with the attested place-name me-ta-pa, its subject can be understood as the transfer of 13 women from one place (Metapa) to another (Teretewe) to the disposition of several unnamed "followers" (e-ge-ta-i).
2. The words pa-te and ma-te frequently repeated in the text represent the Greek words for "father" (πατήρ) and "mother" (μήτηρ), which means that each group of women is specified by their parentage from both sides. The parents of these women are described by their social status (do-e-ro - "slaves" of different types), occupation (ka-ke-u - "bronze-smiths"), or place of origin (ku-te-re-u-pi abl.-instr. pl.)⁴.

Some insight into the meaning of the word do-ge-ja can be gained from An 607 itself, where the parallel expressions do-ge-ja do-e-ra and di-wi-ja do-e-ra are found. Since di-wi-ja is the name of the goddess in the genitive which indicates the "owner" of one of the mothers, do-ge-ja most probably should be understood as the name of the human or divine "owner"⁵ of the whole group of women (also in the genitive feminine) who controlled them, in one way or another, before they were transferred to the authority of the "followers".

Another pair of correspondences - do-ge-ja ki-ri-te-wi-ja and do-ge-ja do-e-ra shows that the word ki-ri-te-wi-ja could be used in the context parallel to that of the social term do-e-ra, being probably an occupational designation of the first group of six women. Outside An 607 this word is attested both at Pylos and Knossos: ki-ri-te-wi-ja women appear as collective land-holders on PY Eb 321 and Ep 704, as recipients (ki-ri-te-wi-ja-i, dat. pl.) of wheat rations on KN E 777, as donors (ki-ri-te-wi-ja-pi, abl.-instr. pl.) of some tribute on PY Un 1426, and as recipients of olive oil in a cultic context on KN Fp 363.

As for the word ke-ri-mi-ja, it follows from the formal analysis of the heading that, if me-ta-pa is the place indication, do-ge-ja is the name of the "owner", do-e-ra is the social term, and ki-ri-te-wi-ja - the occupational designation, this word can only describe the type of the team. The only clue to its meaning may be found in KN Lc 535 where it is opposed to the word ta-ra-si-ja ("allocation"), both words being descriptions of two kinds of cloth (pa-we-a and tu-na-no)⁶.

The question which remains unanswered is the reason for the registration of the double parentage of each group of women in An 607. The only economic document, known to me, where the status of both parents is indicated is the Sumerian record of the distribution of cloths and some other unidentified commodities⁷ from the Ur III period: MVN VI 535. Its best preserved section reads:

- I 3'. DIL 2/3 50 (silà) 1 túg ma-an-s[um] dumu-uš-bar
- 4'. DIL 60 (silà) 4 (ma-na)⁸ lugal-usar-bar-ra
- 5'. AŠ 1 1/3 30 (sila) 1 túg lugal-má-gur₈-re
- 6'. dumu-ni-me
- 7'. ama-bi dumu-gi₇

" ... one cloth (to) Mans[um] the weaver, ... (to) Lugal-usar-bara,

... one cloth (to) Lugal-ma-gure. They are his sons, their mother is free".

In other words, the father of the last two persons is said to be the weaver (dumu-uš-bar) and their mother is "free" (dumu-gi₇). According to the colophon (IV 1-2), all the men registered in this text belong to the social class called un-¹₁ which differed from that of dumu-gi₇. Since children normally worked in teams with their mothers in the Ur III period, it is possible that the status of the mothers was indicated in this text because their sons had only recently been transferred to the work-teams of adult men⁹. This however cannot be the explanation in the case of An 607, since nine women there inherited their status from their fathers and four from their mothers. Only if we assume that these women ceased to be do-ge-ja do-e-ra after the transaction recorded on An 607 and became from now on *e-ge-si-ja do-e-ra, could their previous status be of some interest for the scribe. The masculine form of the last expression is actually attested in the land-register Ed 847:

1. o-da-a₂ e-ge-si-jo do-e-ro e-ko-si o-na-ta
2. [ku-su-qa] to-so-de pe-mo GRA 1 T3 V4

" ... 'slaves' of the follower hold plots of land, altogether (erased) so much seed: 1.3.4 GRA".

To sum up our discussion of An 607, the only thing that can be said with some degree of certainty is that 13 women of "do-e-ro class" previously dependent on a person or a deity called do-ge-ja were transferred by some authority to several unnamed "followers" (e-ge-ta-i). As for the social position of these women, they hardly can be called "slaves" in the true sense of the word: as we have seen, both ki-ri-te-wi-ja (which is the present status of six of them) and e-ge-si-jo do-e-ro (which is probably their future status) are attested as land-holders, and there was some authority at Pylos which could transfer them from one "owner" to another.

2. An 1281¹⁰

- | | |
|--------------------------------------|-------|
| 1. [po] -ti-ni-ja i-ge-ja | |
| 2. [] -mo o-pi-e-de-i | |
| 3. a-ka re-u-si-wo-ge | VIR 2 |
| 4. au-ke-i-ja-te-we [i-ge-ja | VIR] |
| 5. o-na-se-u ta-ni-ko-ge | VIR 2 |
| 6. me-ta-ka-wa po-so-ro | VIR 1 |
| 7. mi-jo-qa [] e-we-za-no | VIR 1 |
| 8. a-pi-e-ra to-ze-u | VIR 1 |
| 9. [] -a-ke-si po-ti-ni-ja re-si-wo | VIR 1 |
| 10. au-ke-i-ja-te-we [] -ro | VIR 1 |
| 11. mi-jo-qa ma-ra-si-jo [] | VIR 1 |
| 12. me-ta-ka-wa ti-ta-ra-[wo] | VIR 1 |
| 13. a-pi-e-ra ru-ko-ro | VIR 1 |

The text is divided into two sections, each marked by the word po-ti-ni-ja ("the Lady") on lines one and nine. The first "Lady" is specified by the adjective i-ge-ja - "of the horses", and the second - by the word [] -a-ke-si which is probably a place-name in the dative-locative plural. Each section consists of two groups of personal names: one in the dative (the same four names in both sections), and the other in the nominative (twelve names followed by the ideogram VIR and the numeral). Accordingly, the subject of the text seems to be the assignment of men in the second group to those in the first. This action is probably described in line two, which can be restored as: [do-so] -mo o-pi-e-de-i - "donation at the shrine (or at the statue)". The structure of the whole text is shown on table XXII.

The social status or occupation of the members of either group is nowhere indicated in the text, but some additional information about them can be found in the ration lists Fn 50 and 867. Both texts deal with the distribution of barley (HORD) to different groups of personnel. Fn 50 ends with a list of four groups of do-e-ro-i (dat. pl.):

Table XXII (PY An 1281)

location recipient	opi-edei	[]-akesi
potinija	aka, reusiwo	resiwo
aukeijatewe	onaseu, taniko	[]-ro
metakawa	posoro	titara[wo]
mijoqa	ewezano	marasijo
apiera	tozeu	rukoro

11. au-[ke-i] -ja-te-wo do-e-ro-i HORD T1
12. mi-jo-[qa] do-e-ro-i HORD V3
13. a-pi-[e-ra] do-e-ro-i HORD V3
14. []-wo-[]-ne[do-e-ro]-i HORD T3

Names of the "owners" are in the genitive, and three of them (Aukeijatewo, Mijoqa, Apiera) are identical with the names of the "recipients" on An 1281. On Fn 867 mi-jo-qa do-e-ro (dat. sg.) is also found. The first line of this text which begins with the signs i-qe-[] should be probably restored as i-qe-[ja do-e-ro].

Table XXIII

text No	An 1281	Fn 50	Fn 867
ideogram	VIR	HORD	
potinija iqeja	2		[]
aukeijatewe	3	T1	
mijoqa	2	V3	[]
apiera	2	V3	

These correspondences between three texts show that most probably the persons recorded on An 1281 became do-e-ro of their recipients

after the transaction took place. It is even possible that they are concealed by the unnamed do-e-ro-i of ration lists.

The previous position of these persons remains unknown, unless we accept their identification with ka-ke-we ("bronze-smiths") of the Jn series where five names of men from the second group (Reusiwo, Onaseu, Posoro, Marasijo, Titarawo) also appear. The identification of these men however, even inside the Jn series, is problematic, since different locations are attributed there for the same names. Their distribution is shown on table XXIV.

Table XXIV

text No	Jn 389	Jn 601	Jn 725		Jn 706	Jn 750	Jn 845
			Jn 658	Jn 692			
place name	akasiione	powiteja	enipatewe	naisewijo	patowote	asijatija	[]
reusiwo				x			
onaseu		x	x				
posoro		x				x	x
marasijo					x		
titarawo	x						

None of these smiths is called do-e-ro or po-ti-ni-ja-we-jo ("belonging to the Lady") though both these categories of smiths are mentioned on Jn tablets (Jn 310, 413, 431, 605, 693, 750). Their identification with the personnel of An 1281 would mean that they were transferred to one of these categories, as a result of the transaction recorded on An 1281.

The use of the epithet i-qe-ja and the expression o-pi-e-de-i suggests that An 1281 deals with some group of cultic personnel. As was shown in the previous chapter, the cultic personnel in Mycenaean Greece consisted of three groups: (1) cultic personnel proper (priests

and priestesses), (2) servants listed by professions, (3) peasants attached to the lands of gods. It seems likely that the four recipients of An 1281 represent the members of the group (1), being jointly in charge of two shrines of the "Lady". As for the twelve men assigned to them, they could belong either to group (2) or to (3). The uncertainty is caused by lack of evidence about their employment after the assignment. Since Aukeijatewe (in the dative) is mentioned three times on Ub 1318 as the recipient of several animal skins (di-pte-ra), it is possible that at least his three do-e-ro became leather workers¹¹.

The distribution of personnel to temples is a common subject of many documents in the Near Eastern economic archives. Such persons were called a-ru-a in Sumerian or širku in Akkadian, both words meaning simply "gift" or "offering"¹². Unlike An 1281 they were usually received not by the individual members of a temple's staff but by temples themselves. Only five texts from the archive of the prison (bīt asīrī)¹³ at Uruk dated in the reign of the local king Rīm-Anum (early Old-Babylonian period) have a comparable structure¹⁴. They record the donation of several persons to the gods, but received personally by the temple-steward (šangum).

BM 16453. Obv. 1. 1 ^dšamaš-na-'a-ra-ri awīl eš-nun-na^{ki}
 2. ša i-lu-ni iššakkum awīl eš-nun-na^{ki}
 3. ša iš-tu mu-ti-a-ba-al^{ki}
 4. m.^dda-gan-ma-an
 5. ú-ša-ri-a-am
 6. [NÍG.B]A šarrim a-na ^dšamaš
 Rev. 7. [nam-h]a-ar-ti m^u-bar-^dšamaš
 8. SANGA ^dšamaš
 9. ZI.GA NÍG.ŠU ^dsin-še-mi
 10. wakil a-si-ri
 11. itⁱšabātum U₄ 22-KAM
 12. MU ri-im-^da-nu-um šarrum

"Šamaš-na'rārī man of Ešnunna (who is) of Ilūnī the farmer¹⁵, man of Ešnunna, whom Dagan-mān sent here from Mutiabab¹⁶. [Prese]nt of

the king to Šamaš. [Re]ceived by Ubar-Šamaš the temple-steward of Šamaš, removed from the authority of Šin-Šemī overseer of prisoners, 22th day of Shebat, year: 'Rim-Anum the king' (Rim-Anum 1)".

3. Tn 316

Another text dealing with cultic personnel is Tn 316¹⁷ which has the most complicated structure of all texts discussed in this chapter:

- Obv. 1. po-ro-wi-to-jo
 2. PU-RO i-je-to-ge pa-ki-ja-si do-ra-ge pe-re po-re-na-ge
 3. a-ke po-ti-ni-ja AUR *215 1 MUL 1
 4. ma-na-sa AUR *213 1 MUL 1 po-si-da-e-ja AUR *213 1 MUL 1
 5 ti-ri-se-ro-e AUR *216 1 do-po-ta *215 1
- Rev. 1. i-je-to-ge po-si-da-i-jo a-ke-ge wa-tu
 2. PU-RO do-ra-ge pe-re po-re-na-ge a-ke
 3. AUR *215 1 MUL 2 qo-wi-ja [] ko-ma-we-te-ja
 4. i-je-to-ge pe-re-*82-jo i-pe-me-de-ja-⟨jo⟩-ge di-u-ja-jo-ge
 5. PU-RO do-ra-ge pe-re-po-re-na-ge a-⟨ke⟩ pe-re-*82 AUR *213 1 MUL 1
 6. i-pe-me-de-ja AUR *213 1 di-u-ja AUR *213 1 MUL 1
 7. e-ma-a₂ a-re-ja AUR *216 1 VIR 1
 8. i-je-to-ge di-u-jo do-ra-ge pe-re po-re-na-ge a-ke
 9. PU-RU di-we AUR *213 1 VIR 1 e-ra AUR *213 1 MUL 1
 10. di-ri-mi-jo di-wo i-je-we AUR *213 1

The main difficulty in the interpretation of this text is the phrase: i-je-to-ge GN(dat.-loc.) do-ra-ge pe-re po-re-na-ge a-ke, repeated four times in the text¹⁸. Neither of the two translations of this sentence so far proposed is entirely satisfactory. The main weakness of the earlier translation of Ventris & Chadwick¹⁹: "(he) sends to GN, brings gifts and leads offerings", is in the absence of the obvious subject of this sentence. Palmer's translation²⁰: "consecration takes place at GN, gifts were brought and offerings purified", is generally preferred now, but none of the forms proposed

by Palmer as interpretations for i-je-to, pe-re and a-ke is actually attested in Greek²¹. Moreover, this translation sounds more like a passage from a chronicle or a ritual than a dry economic account. There is little doubt however that the sole purpose of Th 316 was to record a distribution of 13 gold vessels (do-ra) and 10 men and women (po-re-na) to 12 gods at 6 shrines.

Table XXV (PY Th 316)

shrine	god	<u>do-ra</u>	<u>po-re-na</u>		
			sex	N	description
pakijasi	potinija	*215 (goblet)	MUL	1	
	manasa	*213 (dish)	MUL	1	
	posidaeja	*213 (dish)	MUL	1	
	triseroe	*216 (cup)			
	dopota	*215 (goblet)			
posidaijo		*215 (goblet)	MUL	2	qowija, komaweteja
pere-*82-jo	pere-*82	*213 (dish)	MUL	1	
ipemedēja <jo>	ipemedēja	*213 (dish)			
diujajo	diuja	*213 (dish)	MUL	1	
	emaa ₂	*216 (cup)	VIR	1	
diujo	diwe	*213 (dish)	VIR	1	
	era	*213 (dish)	MUL	1	
	dirimijo	*213 (dish)			

All men and women donated to these shrines are called po-re-na - "offerings"²². The interpretation of this word as "human victims"²³ is most improbable, regardless of the problem of human sacrifices in Mycenaean Greece. It is found in the form po-re-si (dat. pl.) at Thebes on Of 26 as a description of recipients of wool among other groups of women involved in textile industry.

The second paragraph of Th 316 is exceptional in several respects:

the name of the recipient deity is not mentioned, the word wa-tu (𐎠𐎺𐎵) - "town" appears in the introductory sentence, two women are listed together with only one vessel, and the women are further qualified as go-wi-ja and ko-ma-we-te-ja. The first word is hapax and nothing can be said about it, but the second word appears at Thebes a designation of recipients of wool:

- Of 35. 1. ko-ma-we-te-ja te-pe-ja ku LANA 1
 2. ma-ri-ne-we-ja-i a-ki-a₂-ri-ja-de ku LANA 3

te-pe-ja is a female occupational term attested both at Knossos (Le 641) and Pylos (Ad 921), and a-ki-a₂-ri-ja-de is a place-name in the allative. But ko-ma-we-te-ja and ma-ri-ne-we-ja-i (dat. pl. f.) both belong to a group of mysterious feminine adjectives in -eja derived from the names of Knossian "collectors". Thus, ko-ma-we-to appears at Knossos as a "collector" of sheep (Dk 920, 931, 1099, Dv 1272, 7176), goats (C 913), women (Ap 618), and textile products (Le 5629). Additionally, two men (VIR 2) are listed against a word of the same derivation but of uncertain form - ko-ma-we-ta on KN B 798 which is a record of a "household" of uncertain character²⁴. While the real nature of the Knossian "collectors" remains unknown, it would be most realistic to treat them as the "owners" (whether human or divine)²⁵ of women described by the adjectives derived from their names. Consequently, the words go-wi-ja and ko-ma-we-te-ja are probably to be understood as the indication of the former status of two women donated to the shrine Posidaijo.

Fortunately, Tn 316 has a most exact parallel in the Hittite cuneiform text KBo XVI 65 which is very helpful for the better understanding of its general background.

KBo XVI 65

- Obv. I. 1. 1 LÚ 1 SAL IT-TI ^mmi-še-e-ni da-a-u-en
 2. 2 LÚ^{meš} IT-TI ^miš-ma-a-ta da-a-u-en
 3. 1 LÚ 1 SAL IT-TI ^mpí-e-li da-a-u-en
-

4. 1 LÚ 1 SAL IT-TI ^mzu-lu-li-ja da-a-u-en
 5. ki-e LÚ^{meš} uru^{hi}ka-ap-pa-at-ta A-NA É^dI [M I-NA]
 6. uru^{hi}ha-aš-ha-ta-at-ta LÚ^{meš} NU.^{giš}KIRI₆.GEŠTIN
-
7. 6 É^{hi}.a LÚ^{meš} uru^{hi}ku-lu-up-pa I-NA É^dI [M]
 8. I-NA uru^{hi}ha-aš-ha-ta-at-ta GAL.GUŠKIN GAL.KÙ.B [ABBAR]
 9. a-ri-im-ma-aš-ša IŠ-TU GUŠKIN Û KÙ.B [ABBAR]
 10. ha-a-li-iš-ši-ja-an-za na-an a-pi-e- [da-ni]
 11. uš-ka-an-zi
-
12. 1 IKU ^{giš}KIRI₆.GEŠTIN IT-TI ^mhu-ut-ti-i-li []
 13. da-a-u-en 1 IKU ^{giš}KIRI₆.GEŠTIN IT-TI ^m[]
 14. da-a-u-en
-
15. AN-NU-UT-TI LÚ^{meš} uru^{hi}ku-lu-up-pa a-pi- [e-da-ni]
 16. a-ra-aš a-ri-i da-a-aš-ki-e- [iz-zi]
-
17. [IK] U ^{giš}KIRI₆.GEŠTIN IT-TI ^m[]
 18. [da-a-u-en]

Rev. IV. 1'. []

- 2'. ki-i I-NA []
 3'. LÚ^{meš} hi-lam-mi-e-eš []
 4'. tak-ka-li-eš-kan-zi []
-
- 5'. TUP-PI uru^{hi}ha-aš-ha-te-it-ta
 6'. TUP-PI uru^{hi}ki-iš-ta-ma
 7'. TUP-PI uru^{hi}ka-ap-pa-at-ta
 8'. TUP-PI uru^{hi}ta-ak-ki-mi-iš
 9'. DUB 2-KAM QA-TI

- § 1. "One man (and) one woman from Miseni we took, two men from Ismata we took, one man (and) one woman from Peli we took.
 § 2. "One man (and) one woman from Zululiya we took. These are the men of Kappatta for the house of the St[orm]-god at Hashatatta, (they are) vine-growers.
 § 3. "Six houses of men of Kuluppa in the house of the St[orm]-god at Hashatatta, gold vessel, s[ilver] vessel and arimma-vessel

laid with gold and s[ilver]. They will inspect, it the[re].

§ 4. "One IKU of vineyard from Huttilli we took, one IKU of vineyard from [PN] we took.

§ 5. "These are the men of Kuluppa, the [re ...] one will take for another.

§ 6. "[x IK]U of vineyard from [PN we took].

§ 7. "These at [...] men of the gate-house [...] they include [...].

§ 8. "Tablet of Hashatitta, tablet of Kistama, tablet of Kappatta, tablet of Takkimis. Second tablet is ended."

The surviving text represents about a quarter of the original tablet, which itself is the second tablet in a series. The use of the first plural da-a-u-en ("we took") in the combination with the preposition "with" (IT-TI in Akkadian) shows that this text is probably based upon a Luwian hieroglyphic prototype. Economic documents written in this script regularly use the preposition CUM-ni in a sense "from" with the verbs for buying and selling, and the first plural form pi-ia-mi-na ("we give") is attested there as a standard formula²⁶. The sudden change from the preterite to the present-future on line I. 11 also suggests that KBo XVI 65 was composed on the basis of some previous document, probably during the inspection of the temple inventory.

The most striking similarity between this text and Tn 316 is the combination of men, women and gold vessels as an offering to the temple. This parallel shows once again that the few surviving Hittite economic documents reflect more than typological similarity with Mycenaean Greece.

Two points are particularly noticeable in KBo XVI 65:

1. At least some donated men and women are called hi-lam-mi-e-eš which is the variant of the word hilammates - "men of the gate-house", and as we have seen, this word probably corresponds to members of cultic "households" listed by professions at Pyles.
2. Unlike Tn 316, several plots of land (six "households" and three

vineyards) are given to the temple of the Storm-god together with the personnel, but in a different village (i. e. in Kuluppa, while men and women are from Kappatta).

This comparison shows that Tn 316 probably records the assignment of personnel to several cultic "households" which were discussed in the previous chapter. Two shrines mentioned in Tn 316 - Pakijasi and Posidaijo - are indeed attested as the cultic "households" in the ration list Fn 187 (in the allative: pa-ki-ja-na-de and po-si-da-i-jo-de). The goddess Diuja - one of the recipients of Tn 316 also appears as the "owner" of male and female "slaves" on An 607 (di-wi-ja do-e-ra) and Cn 1287 (di-u-ja do-e-ro). If this interpretation of Tn 316 is correct, it would mean that po-re-na was the general term for persons assigned to cultic "households".

4. Conclusions

There was some authority at Pylos which could transfer men and women from one superior to another. The subjects of such transactions were called PN(gen.) do-e-ro ("slave of PN") or were described by the adjectives derived from personal names. Their "owners" either before or after the transaction could be human or divine.

Table XXVI

text No	former status	later status	recipient
An 607	do-qe-ja do-e-ra	*e-qe-si-ja do-e-ra (?)	e-qe-ta-i
An 1281	ka-ke-we (?)	PN(gen.) do-e-ro-i	po-ti-ni-ja
Tn 316	qo-wi-ja, ko-ma-we-te-ja	po-re-na	4 PN 12 DN

The very fact that these persons could be transferred from one owner to another shows that they cannot be regarded as "slaves"

in the classical sense i. e. private property of other persons. Some of them probably had their own plots of land. Thus, for example, three small-holders (o-na-te-re) mentioned in the land-register En 609/Eo 224 changed their superiors between the two redactions of this survey, maybe as a result of the procedure similar to that discussed. It is also not unlikely that persons described by adjectives derived from titles, such as: wa-na-ka-te-ro (En 74, 609, Eo 160, 276, 371), po-ti-ni-ja-we-jo (Eb 364, Ep 613), ra-wa-ke-si-jo (Ea 59, 132, 421, 782, 809, 814, 822, 823, 882, 1424), e-ge-si-jo (Ed 847) belong to the same group of the population.

Unfortunately, we have no information about the nature of the authority which had the power to assign people to their superiors. Usually it is supposed to be a "palace", but the texts themselves are silent on this matter²⁷.

NOTES

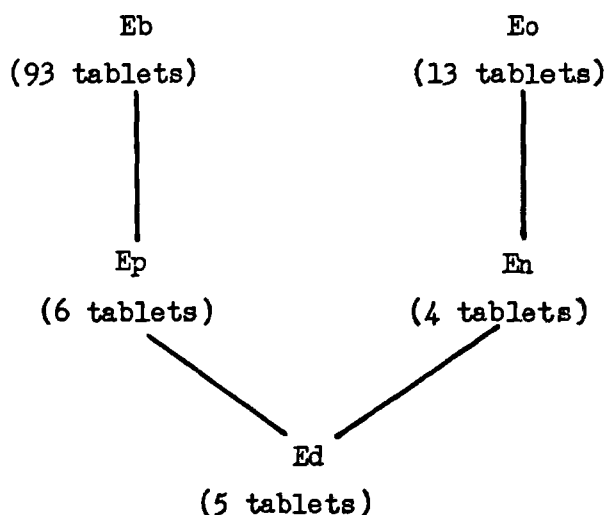
1. F. R. Adrados, Do-ge-ja, diosa micénica de la fecundidad, Minos 5, 1957, p. 53-57; S. Deger-Jalkotzy, The Women of An 607, Minos 13, 1972, p. 137-160.
2. See p. 9-12.
3. M. D. Petruševski, E-ge-te-i e-e-to te-re-te-we, ZA 15, 1966, p. 352.
4. This place-name is attested (in the ablative-instrumental) on Na 396.
5. Not necessarily divine, on Cn 1287 di-u-ja do-e-ro ("slave of the goddess Diuja") is recorded side by side with ke-re-ta-o do-e-ro - "slave of Kereta (Cretan ?)".
6. M. Lindgren, The People of Pylos, Uppsala, 1973, II p. 78; see also n. 173 for Chapter II (p. 105).
7. Perhaps barley and wool, since these commodities are measured in dry capacity and weight measures.
8. ma-na according to Rev. I 3. šū-nigín 23 guruš 60 (silà) 4 ma-na - "altogether 23 men per 60 quarts and 4 minas each".
9. A work-team of ašlag-dumu-gi₇ - "free fullers" is attested at MVN VI 70.
10. A. M. Jasink Ticchioni, Contributi micenei, SMEA 21, 1980, p. 212; Il 'laboratorio NE' del palazzo di Pilo, Kadmos 23, 1984, p. 16-18; J.-P. Olivier, A propos d'une 'liste' de desservants de sanctuaire dans les documents en linéaire B de Pylos, Bruxelles, 1960, p. 133-136.
11. An 1281 and Ub 1318 were both found in Room 99 of the Pylian palace.
12. I. J. Gelb, The Arua Institution, RA 66, 1972, p. 5.
13. S. I. Feigin, The Captives in Cuneiform Inscriptions, AJSL 50, 1934, p. 220-228; 51, 1935, p. 22-24; W. F. Leemans, The asīru, RA 55, 1961, p. 57-76.
14. RIAA 250, MDP II p. 81, VS XIII 36, BM 16449, 16453 (Appendix No 12 and 11).
15. Ilūnī is of course the name of the last king of Ešnunna (J.-P. Kupper,

- RLA V p. 63), but in BM 16449 issued in the same day as BM 16453 (22/11 Rīm-Anum 1) another "iššakkum man of Ešnunna" appears (Munawirum). It seems certain that in this group of texts iššakkum means "farmer" (often in plural) and not "ruler".
16. According to BM 16438 (Appendix No 13) this Dagan-mān sent from Mutiabal group of 47 captives (^{lu}a-si-ri). Leemans suggested that he was the king of Mutiabal (RA 55, p. 72).
 17. E. L. Bennett, PU-R0, vacat (PY Tn 316. 7-10, v. 13-16), CM, 1979, p. 221-234; C. Gallavotti, La triade Lesbia in un testo miceneo, RF 34, 1956, p. 225-236; W. Merlingen, Deux observations concernant Pylos Tn 316, Athenaeum 36, 1958, p. 383-388; L. R. Palmer, A Mycenaean Calendar of Offerings (PY Kn 02), Eranos 53, 1955, p. 1-13.
 18. The controversy over this sentence was summarised by J. T. Hooker in his Linear B, An Introduction, Bristol, 1980, p. 160-161.
 19. Documents², p. 172.
 20. L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford, 1963, p. 262.
 21. They are supposed to be *φρη (aorist passive from φέρω) for pe-re, and otherwise unattested verbal forms of ἱερός and ἄνυός for i-je-to and a-ke.
 22. o-grade of the stem whose e-grade is found in φέρω.
 23. J. Chadwick, The Mycenaean World, Cambridge, 1976, p. 92; G. Pugliese-Carratelli, Miceneo povera, SCO 7, 1958, p. 27-31.
 24. Class III.2, see p. 58.
 25. See n. 4, 63, 178 for Chapter II (p. 94, 98, 105).
 26. J. D. Hawkins, A. Morpurgo-Davis, Buying and Selling in Hieroglyphic Luwian, Serta Indogermanica, Innsbruck, 1982, p. 96, 104.
 27. In Middle Kingdom Egypt, for example, there was a special "bureau" called h; n dd rmt - "Office of the Provider-of-People" which supplied labourers for public works (W. C. Hayes, A Papyrus of the Late Middle Kingdom in the Brooklyn Museum, Brooklyn, 1955, p. 54-56).

V AGRICULTURAL MANPOWER

(land-surveys)

Several groups of Linear B texts have been identified as land-registers: the E series at Pylos and Tiryns and Uf series at Knossos. To these can be added several Pylian Na tablets dealing with flax¹, and, finally, land-holding terminology occasionally appears in some lists of personnel from Pylos (An 724, 830) and Knossos (As 608, 625). By far the most elaborate, detailed and well preserved are the tablets of the Pylian E series, which rightly regarded as the most important group of documents in the Pylian archive². They are subdivided into nine sets, and five of them (Eb, Ed, En, Eo, Ep) are connected to each other: Eb/Ep and En/Eo tablets are duplicates and Ed tablets are their totals. Eb and Eo are sets of short tablets recording one land-holding each, while the En and Ep sets summarise the information recorded on Eo and Eb respectively. The Eb/Ep land-register deals with the land called ke-ke-me-na ko-to-na, and En/Eo - with the land called ko-to-na ki-ti-me-na. The relationships between these five sets can be represented graphically:



The special attention given to these texts by many scholars is fully justified, since no other text reflects so directly the social

structure of the agricultural society than the land-register.

Nearly all Linear B texts dealing with land-holding belong to three broad categories according to their formula:

I Eq 213 (one example only):

GN(gen.) o-ro-jo "so much seed".

II Simple land-holdings

a) KN Uf 835, 981, 1022, 1031; PY An 724.11, Ea 28, 59.2, 803, 806, 811, 812, 821, 823, 882, Eq 146, Er 880, Es 650, Na 334, 394, 405, 406, 514, 516, 543, 926, 928:

PN/title "has" (type of land) (measurement)³

b) PY An 830.6, Ea 71, 756, 781, Er 312, Eq 36:

PN/title(gen.) (type of land) (measurement)

III Complex land-holdings

a) PY Ea 29, 52, 56, 57, 59.4.7, 136, 208, 258, 259, 304, 439, 460, 773, 778, 782, 800, 814, 816, 822, 824, 825, 827, Eb/Ep and Eo series:

PN₁ (title) "has" (type of land) pa-ro PN₂/da-mo (measurement)

b) KN Uf 983:

PN₁(gen) (type of land) o-pi PN₂ (measurement)

c) PY Ea 59.5, 805:

PN "has" (type of land) e-ne-ka x(gen.) (measurement)

d) PY Ea 59.3, 109, 132, 270, 305, 421, 480, 481, 754, 757, 771, 776, 799, 801, 802, 809, 813, 820, 1424, En series:

PN₁ "has" (type of land) PN₂(gen.) (type of land) (measurement)

e) Ea 782:

PN₁ "has" (type of land) pa-ro PN₂(gen.) (type of land) (measurement)

Despite numerous efforts many of the most basic questions about the meaning of these formulae remain unanswered, among them: the very purpose of these texts, the meaning of various land-holding and social terms which appear in them, the meaning of the relationships expressed by prepositions (most commonly pa-ro) in the records of type III. If the answer to the second question depends largely on the progress

of Mycenaean philology, the other two questions concerning the purpose and the formal structure of the texts require broad-scale comparison with other available material of a similar nature. Though the need for such a comparison is generally accepted⁴, the Linear B land-registers have never been seriously compared with any other similar documents, with the sole exception of the Anglo-Norman Domesday Book⁵.

Meanwhile, there is no shortage of material for comparison: land-registers of a different kind (so-called "cadastres") are found in almost every large economic archive from the very beginning of writing. The principal published texts of a cadastral character can be listed here in the chronological order:

1. The Uruk period (the end of the IV millennium B.C.) - one text⁶.
2. The Jemdet Nasr period (about 3000 B.C.) - six texts⁷.
3. Texts from archaic Ur (about 2800-2600 B.C.) - 67 texts⁸.
4. The Fara period (about 2600 B.C.) - 45 texts⁹.
5. Pre-Sargonic Lagash (about 2450-2400 B.C.) - 50 texts¹⁰.
6. Texts from Ebla (2400 B.C. ?) - 55 texts¹¹.
7. The Sargonic period (about 2400-2200 B.C.) - 184 texts¹².
8. The Ur III period (about 2100-2000 B.C.) - 72 texts¹³.
9. Texts from Alalakh (XV cent. B.C.) - 13 texts¹⁴.
10. The Neo-Hittites cadastres (XIV cent. B.C.)¹⁵.
11. Texts from Ugarit (XIII cent. B.C.) - 18 texts¹⁶.
12. Wilbour Papyrus from Upper Egypt (XII cent. B.C.)¹⁷.
13. Assyrian Domesday Book from Harran (VIII cent. B.C.)¹⁸.
14. Cadastres from Hellenistic Egypt (II cent. B.C. - III cent. A.D.)¹⁹.
15. Post-Diocletian capitatio terrena from Aegean islands and Asia Minor²⁰.
16. Anglo-Norman Domesday Book (1066 A.D.)²¹.
17. Byzantine cadastre from Thebes (XI -XII cent. A.D.)²².

The most characteristic feature common to all the texts listed above, despite their distribution throughout four millennia and the wide geographical distribution, is the great attention given by the cadastre-makers to the exact location of every field. Thus, if several fields were held by the same person, they are listed one after another

in the repetitive manner which is unmistakably the most recognisable "trade-mark" of every cadastre from any period and place. Different schools of cadastre-makers used different techniques of record keeping. In Wilbour Papyrus three different formulae according to the type of land-holding are used: "another measurement (made) for him" (ky h;v n.f), "another apportionment (made) for him" (ky pš n.f) and "the land (cultivated) by him" ('ht.f). The similar expression: "PN also holds" (isde PN tenet) is found in the Domesday Book. In the Sumerian "round tablets" from Lagash of the Ur III period small plots (gán) are first measured and then a person responsible for their cultivation (engar) is named. In a similar way but in a different order, in late Roman capitatio terrena from Astypalaia, Thera and Tralles, first the owner of the latifundia (ὀσπορία) is named and then his χωρία are listed and measured. In most other cases the name of the landholder is simply repeated monotonously after each field. Thus, in the Hittite "cadastre A" (KUB VIII 75) no less than 14 fields of the same person - Tuttu-pittauriyas are listed.

Only one text among the Linear B land-registers has a comparable structure - Eq 213 which is classified as a category in itself because of its uniqueness (type I). Five place-names are listed there one after another, all preceding the same word o-ro-jo. Since this word is in the genitive, it can be regarded as the name of the "owner", whether it is a person or an institution. The total area of all five fields listed in this text is 94 GRA, and the same number is found in the land-register Er 880 as a total of the land at the disposal of the high official Ekera₂wo, which can suggest that this was the standard size of the land-holding of certain type or of the official of certain rank.

The heading of Eq 213 confirms the conclusion that this is the only existing Pylian cadastre in the true sense of the word, and it reads:

o-wi-de a-ko-so-ta to-ro-qe-jo-me-no a-ro-u-ra a₂-ri-sa

"Thus saw Akosota inspecting the a₂risa fields". This is the only place in the Linear B corpus where the Mycenaean word for field is mentioned, which is the same word as in the cadastres from Hellenistic Egypt (ἄρουρα). The reason for the composition of this text ("inspection") is also the very common one in various cadastres: kurum₇-ak in the Sumerian field lists or ἐπισκεψίς in Hellenistic Egypt.

The introductory particle o- at the beginning of the heading shows that Eq 213 could be the first text in the series, the other texts of which did not survive or were never written. It is possible however that the very fragmentary text Eq 36 belongs to the same series: the professional term a-de-te is repeated there twice (lines 2 and 4), preceded and followed by the place indication (1. []-we-jo wa-tu; 6. []-ni-ja-de).

All other Linear B land-registers show little interest in the exact location of any particular field. If one person holds more than one field this fact is simply recorded as "PN e-ke dwo ko-to-no" - "PN has two plots of kotona-land (in dual)" (Eb 338, Eo 278). In the duplicates of these tablets, Ep 704.7 and En 467.1, even the word "two" is omitted.

Only in two other cases several plots of the same land-holder are listed one after another: Ea 59.3-5 and Ep 539.4-5, but these plots stand in different relationships towards the other land-holders. It seems that these relationships expressed by various formulae classified as "type III" were the matter of primary importance for the scribes responsible for this group of texts and not the exact location of each particular field.

The difference in approach to the material in the land-registers of types II and III can be easily demonstrated by a comparison between the Pylian series En/Eo and Es. In both cases the lands of two very similar groups of 14 landholders (in En they are called te-re-ta) are registered. In the En/Eo series however ten of these principal

land-holdings are accompanied by small plots called o-na-to which are held by other people (called o-na-te-re), and the relationships between each te-re-ta and his o-na-te-re are expressed by the preposition pa-ro (type IIIa).

The Es series is composed along very different lines²³: plots of all 14 land-holders are simply listed on Es 650 according to a formula of the type IIa, then 13 of them appear again on the separate tablets each as a contributor of offerings (do-so-mo) to Poseidon and all of them together on Es 644 as donors of the annual contribution (do-so-mo we-te-i-we-te-i) to an unknown destination. This strong connection with tributes of some kind (do-so-mo) is typical of the texts of type II: the land-register Er 312-880 is closely associated with the record of offerings again to Poseidon (Un 718), and land-holding records among Na series belong to the file dealing with the delivery of flax as tribute in kind.

It would be easy to imagine the land-register dealing with 14 te-re-ta of En/Eo series in the same way as Es 650, but this is not the case: the En/Ep land-register as well as other texts of the type III were obviously written for a different purpose.

If so, the crucial questions are: what this purpose is? why was it so important to record the relationships between different land-holders? And finally, what is the nature of these relationships?.

The heading of the En series found pn En 690.1-2 reads:

1. pa-ki-ja-ni-ja to-sa da-ma-te DA 40
2. to-so-de te-re-ta e-ne-e-si VIR 14

I cannot agree with those scholars who interpret the ideogram DA as a land-measure²⁴ and even are able to calculate the ratio between DA and GRA measures. The equation of 40 DA with 96 GRA is made by de Fidio on the basis of the total of all land-holdings recorded on

En and Ep series, which is unjustified, since the first lines of En 609 are clearly the heading of En series only. The use of both DA and GRA ideograms in the same text TI Ef 2, if both were measures of land, is evidently superfluous. The use of DA ideogram in Linear B fits well however with the original view proposed by E. L. Bennett²⁵ that it is an abbreviation of the word da-ma-te with the basic meaning "household" or "homestead". In the case of En series this interpretation is the most obvious one, since 39 persons are listed altogether in this group of texts, and the absence of one is fully expected since only 13 te-re-ta are actually present²⁶. Thus, the heading can be translated as: "at Pakijana so many households: 40, so many tereta are among them, 14 men". Unlike Eq 213, this heading does not mention fields at all, but indicates that the En series (and its duplicate Eo series) is the list of households. The importance of the relationships between land-holders is indicated in the heading as well: of 40 householders 14 are the principal land-owners (te-re-ta) and the rest are o-na-te-re.

Since the Bennett's original research, it was too easily accepted that o-na-to means "lease", o-na-te-re - "tenants", and the formula of the type IIIa - "PN₁ e-ke o-na-to pa-ro PN₂ (dat.)" means "PN₁ holds the lease from PN₂". However, the Greek equivalent of the Mycenaean pa-ro, the preposition $\pi\alpha\rho\acute{\alpha}$ with the dative normally means "at", not "from". The evidence of the Arcadian dialect (which is closely related to Mycenaean) where the prepositions $\pi\alpha\rho\acute{\alpha}$, $\alpha\mu\acute{\iota}$, $\epsilon\acute{\xi}$ with meaning "from" are used with the dative, is usually put forward to support this view about the meaning of Mycenaean pa-ro. But Householder argued convincingly that in Arcadian these prepositions are used with the ablative, which in this dialect merged with the dative and not with the genitive, as in Attic²⁷. In Mycenaean, however, the ablative-instrumental is distinguished from the dative-locative, at least in the plural, and from the expression pa-ro ka-ke-u-si (An 129) it is clear that pa-ro was used with the dative-locative and not with the ablative²⁸.

At Pylos the preposition pa-ro is frequently used in lists of personnel (An 129, 340)²⁹ and lists of sheep and goats (Cc 660, Cn 40, 45, 131, 254, 418, 459, 599, 600, 925, 938, 962) with the dative also, with this meaning "at", "in the disposition of":

An 340.1 pa-ro a-ta-o VIR 6 - "at (the disposition of) Atao six men"
Cn 131.2 pa-ro pi-me-ta x OVIS^m 200 - "at (the disposition of) Pimeta 200 rams".

This usage is hardly reconcilable with the traditional interpretation of the formula IIIa. It is useful also to compare this formula with the type IIIb which is represented by a single text from Knossos Uf 983:

a. [] o-pi po-to-ri-ka-ta []
b. [] -do-wo / e-ko-so ke-ke-me-na []

As was shown by Killen³⁰, the preposition o-pi with the dative was used at Knossos with a meaning very similar to that of pa-ro at Pylos: "at", "chez", "under the supervision of". This text can be thus translated as: "plot of kekemena-land of [] -dowo at Ekoso (GN), at (the disposal of) Potorikata (PN)". It can be regarded, in fact, the Knossian equivalent of the Pylian construction with pa-ro, but in no circumstances can o-pi be translated as "from".

There are a few other indications that the Pylian complex land-registers of type III do not deal with leases of land by one person from another. On Eo 224 two men - Souro and Edomoneu - hold their plots pa-ro Parako, and one woman - Posoreja - pa-ro Tataro. In the parallel record En 609.10-18 all three persons are called o-na-te-re of Amaruta. However, neither the size of the ko-to-na of Amaruta (2 GRA 3T) nor the size of all three o-na-to (3V, 1T and 1T 3V respectively) were affected by this change (from either direction). It seems that the three households were simply transferred from one superior to another, which is inconceivable on the view that they were tenants

leasing their plots from the landowner.

The traditional interpretation of the construction with pa-ro was heavily influenced by the comparison with the Domesday Book where the formula "PN holds the land from the King, the Bishop, etc." is frequently used. The comparison is hardly reliable, however, since only vassals (barons and knights) held their fiefs from their feudal lords, according to this cadastre, while peasant-tenants (villagers, cottagers, smallholders, freedmen, and serfs) are only listed without reference to the size of their leases. This feature is typical for other cadastres as well: in capitatio terrena the coloni are merely listed after the description of the latifundia, but the size of their plots is irrelevant for the cadastre-maker, just as in the Domesday Book, since in both cases the tenants did not pay taxes to the Crown. As we have seen, the Linear B complex land-registers are not cadastres at all, and their structure has no parallel among the texts of cadastral type.

The only group of texts suitable for comparison with the Pylian complex land-registers are the so-called Middle-Hittite land-donations ("Landschenkungsurkunden", abbreviation LS) from the XV century B.C. There are 30 of this kind, 29 of them were published by Riemschneider³¹ and one more by Easton³². The purpose of these documents surely is very different from that of the Pylian land-registers (whatever it was): they are the royal grants of land to private persons and to temples, with their characteristic preamble and final clauses. Nevertheless, the description of the donated land itself was probably copied from the lists of households written in the Luwian hieroglyphic script on wooden tablets. Only one fragment of such a document, accidentally written on lead, survived among the so-called Kululu lead strips (strip No 3+fragment 2)³³ and it is closely similar to the descriptive part of the land-donations. Strictly speaking, these perished lists should be compared with the Linear B documents, but, if we assume that they were faithfully copied by the scribes responsible for the composition of the royal grants, the latter are still useful for comparison.

By far the most detailed account of donated land is found in the largest text - LS1, which records the donation of two estates which previously belonged to the "scribe on wooden tablets" Suppiluliuma and the "overseer of the weavers" Hantapi, to the hierodoule Kuwatalla. Each estate consists of "houses" ($E^{bi.a}$) of personnel called SAG.DU GEME.İR^{meš} - literally, "the heads of the slave-girls and the slaves". They are not however slaves in the classical sense: they possess their own households and some of them their own slaves (LS 28). The description of each household includes the enumeration of its personnel (men, women and children), its cattle, and land. The "house" of Suppiluliuma consists of eleven such households and the "house" of Hantapi - of two households. Texts LS 7, 9, 18, 21, 25, 26, 28 have a similar structure, but not much has survived from them. Texts LS 2, 3, 4, 6, 20, and JCS 33 p. 8-9 are arranged in a different way: only the land is recorded there, and a distinction is made between the lands of the palace ($\check{S}A \acute{E}.GAL$, LS 3,4), of the temple ($\check{S}A \acute{E}^{TIM}$, LS 2), of private person ($\check{S}A \langle m \rangle Ta-an-d[a-me-i]$, JCS 33) on the one hand, and the lands of craftsmen ($\check{S}A L\acute{U}^{meš} gišTUKUL$, LS 2, 4) and ploughmen ($\check{S}A L\acute{U}^{meš} URU_4.LAL^{TIM}$, LS 3, JCS 33) on the other hand. Outside the land-donations a similar distinction between the fields of the god ($A.\check{S}A DINGIR^{LIM}$) and the fields of the ploughmen ($A.\check{S}A l\acute{u}URU_4.LAL$) is found in the instructions to the temple-steward (KUB XIII 4, Rev. IV 12-24). Already Riemschneider pointed out that this distinction has its correspondence in LS 1 where in totals the oxen of pir-sahhanas and those of SAG.GEME.İR^{meš} are distinguished³⁴. The word pir-sahhanas is found only in this text and in a corrupted form pi-ri-eš-ha-an-na-aš-ša in the instructions to the commander of the frontier-post (BEL MADGALTI, KUB XII 2, IV 28). It means "the house of sahhan". The meaning of the word sahhan is known mainly from the Hittite law code (§ 39-41, 46, 51, 54, and in the later version § XXXVII-XXXVIII)³⁵, and from two royal immunity grants to Sahurunuwa³⁶ and to Ura-datta (KUB XXVI 58). It means basically the obligations of service closely connected with the land-holding³⁷. From the Hittite laws we know on whom and in what circumstances it was imposed, and from royal grants - what kind of services it included. Thus, pir-

sahhanas means "the house of service", and it must refer to the land of some kind, but where is this land in LS 1?

Unfortunately, the obverse of the tablet is badly damaged, so that only the total of the estate of Suppiluliuma is fully preserved. But the account of the estate of Hantapi consists of three paragraphs:

- 1) 8 IKU of field with the threshing-floor in the village Parkala without any reference to the personnel or cattle;
- 2) the "house" of Tiwatapara which includes five persons (Tiwatapara himself, his wife, one son, and two daughters), 58 sheep and goats, 6 oxen (of pir-sahhanas !), one house and a pasture at the village Parkala, 1 IKU of meadow, $3\frac{1}{2}$ IKU of vineyard and 82 fruit trees at the village Hanzusra;
- 3) the "house" of Pulliyanni with 14 persons (2 men, 4 women, 3 boys, 3 girls, and 2 old women), 6 oxen, 2 donkeys, 2 cows, 1 calf, 17 goats, one house, vineyard, olive-trees, and fig-trees (not counted) at the village Siyanuwanta, and $7\frac{1}{2}$ IKU of vineyard at the village Antarla.

Thus, the whole estate of Hantapi consists of 20 IKU of land, of which 12 IKU are in the possession of his "slaves" Tiwatapara and Pulliyanni, while 8 IKU with the threshing-floor are under the direct authority of Hantapi himself. Despite the damaged state of the account of Suppiluliuma's estate, it seems that it has the same structure: the total gives the number of 11 "house of the slaves" of Suppiluliuma, but the account is divided into 15 paragraphs, four of which (§ 9, 10, 12, 15 = Obv. 44-51, 56-61, Rev. 7-11) seem to deal with the land only, without any references to the personnel or cattle, similar to the first paragraph of the account of Hantapi's estate.

Between the total of the estate of Suppiluliuma and the beginning of the account of Hantapi's estate there is one more paragraph (Rev. 20-25) where only lands are recorded (3 kapunu $12\frac{1}{2}$ IKU of field, 28 IKU of pasture, and $2\frac{1}{2}$ IKU $3\frac{1}{2}$ gipessar of forest) with references to their previous owners only:

24. ... ŠA É^m kar-pa-ni É^f zi-it-ḫa-ri-ja ku-it
 25. na-aš-ta a-pí-e-ez šar-ra-an

"which is of the house of Karpani and of the house of Zithariya, and it is cut off from that".

The editor took this passage as referring to the third estate donated to Kuwatalla, which is omitted from the final total, since it gives the number of 13 "houses" (11 "houses of Suppiluliuma", plus 2 "houses of Hantapi"). It seems more likely that this is a reference to the land directly administered by the land-owner, as the other five paragraphs mentioned above. Thus, we can conclude that the whole estate donated to Kuwatalla consisted of 13 households of the "slaves" and at least six plots of land under the domain exploitation.

Among the other land-donations the most similar structure has, paradoxically, the shortest one - LS 29, which is in fact a very brief summary of the real or fictitious land-donation to the temple of three gods at the city of Tanipiya quoted at the end of the Illuyanka Song³⁸:

KBo III 7 IV.24. 6 ka-pu-nu A.ŠÀ 1 ka-pu-nu ^{giš}SAR.GE [ŠTIN ŠA]³⁹
 25. É^{TIM} Û KISLAḫ 3 É^{hi.a} SAG.GEME.Ì [R^{mes}]

"six kapunu of field, one kapunu of vineyard [of] the temple with the threshing-floor, three households (of) the heads of slave-girls and slaves".

Another parallel is provided by the late Hittite cadastres⁴⁰ where at the beginning of "text A" at least eight fields are listed without any reference to their owner, and then at least 73 fields (in the total 88) of 13 named persons are listed. The colophon reads:

KUB VIII 75 left edge 3.

ŠU.NIGÍN.GAL 5 ME 25 PA QA-DU É.GAL^{LIM} lú^{MAŠ}.EN.KAK

"the grand total: 525 parīsu⁴¹ (of) the palace together with muškēnu".

We can summarise now all the Hittite evidence in the following table:

Table XXVII

source	(1) domain land	(2) plots of peasants
LS 1	<u>pir-sahhanas</u>	ŠA SAG.GEME.İR ^{meš}
LS 2	ŠA É ^{TIM}	ŠA LÚ ^{meš} giš ^{TUKUL}
LS 3	ŠA É.GAL	ŠA LÚ ^{meš} URU ⁴ .LAL ^{TIM}
LS 4	ŠA É.GAL	ŠA LÚ ^{meš} giš ^{TUKUL}
LS 29	ŠA É ^{TIM}	É ^{hi.a} SAG.GEME.İR ^{meš}
JCS 33 p. 8-9	ŠA É ^m Ta-an-da-me-i	ŠA LÚ ^{meš} URU ⁴ .LAL ^{TIM}
KUB XIII 4	A.ŠA DINGIR ^{LIM}	A.ŠA lú ^{URU⁴.LAL}
KUB VIII 75	É.GAL ^{LIM}	lú ^{MAS.EN.KAK}

It seems that pir-sahhanas was the most general Hittite term for the land of the first category. For this reason it was so rarely used - in most cases more specific description of land was needed ("of the palace", "of the temple", "of the god", "of PN").

If we return now to the Pylian land-register En/Eo, the conclusion that the Hittite pir-sahhanas corresponds to the ko-to-na and the plots of "slaves", ploughmen and craftsmen - to o-na-to, seems to be irresistible. The essence of the relationship between the two types of land tenure in both cases was probably that the holders of the small plots cultivated the domain land on behalf of its owner (whoever he was) on the basis of corvée work.

The main difference between the Hittite and the Mycenaean systems of land tenure is that we have no evidence that the central authority controlled in any way the lands registered in the Pylian records. But the palace probably did control the manpower of small-holders (o-na-te-re) attached to the lands (ko-to-na) of private persons (te-re-ta). In other words, it seems that the central authority determined the relationships expressed by the construction with pa-ro and

the chief purpose of the complex land-registers was the control of these relationships.

* * *

Several features of Mycenaean land tenure cannot be explained with the help of the Hittite evidence. The most important of them are the land tenure described by the formula pa-ro da-mo and the conditions of the holding of the land called ka-ma. In both cases the comparison with the Sumerian material appears to be most useful.

Both types of land are listed in the Pylian land-register Eb/Ep, which deals with four groups of the land-holders:

- 1) 12 ko-to-no-o-ko - "holders of kotona-land" (Eb, 369, 377, 496, 501, 566, 747, 846, 874, 892, 893, 895, Ep 301). Five of them hold their plots (o-na-to) pa-ro da-mo, and seven hold ko-to-na. Eight of them are also te-re-ta in the land-register En/Eo.
- 2) 13 holders of ka-ma-land (Eb 149, 152, 156, 159, 173, 177, 495, 842, 862, 1347, Ep 613.1-13). Their holdings are of three types: ka-ma, ka-ma o-na-to and o-na-to pa-ro ka-ma-e-we (the holder of ka-ma is called ka-ma-e-u).
- 3) 33 "slaves of the god" (te-o-jo do-e-ro/a) holders of o-na-to pa-ro da-mo (Eb 169, 212, 347, 464, 498, 838, 858, 866, 871, 885, 890, 900, 905, 913, 915, 1174, 1344, Ep 212, 539.1-6, 613.15-20, 705). Seven of them are also the o-na-te-re of the land-register En/Eo.
- 4) 5 high officials, most of them cultic: priest (i-je-re-u), priestess (i-je-re-ja), keybearer (ka-ra-wi-po-ro). Their lands are of the three types: o-na-to pa-ro da-mo, e-to-ni-jo and ko-to-na (Eb 294, 297, 388, 399, 472, 473, 477, 1176, 1187, Ep 539.7-14, 704). Their 6 "slaves" hold the plots pa-ro da-mo, but one female "slave of the god" hold her plot as a "gift" (ke-ra) from the priestess.

The land is distributed among these four categories of the land-holders very disproportionately. The largest holdings belong to

ka-ma-e-we and the group of cultic personnel: their lands together occupy 75% of all the territory, while 33 te-o-jo do-e-ro possess only about 10% of all the land.

The main difference between this land-register and the En/Eo series is that in Eb/Ep the small plots (o-na-ta) are not attached to the large holdings (ko-to-na), but are held pa-ro da-mo. If my interpretation of the construction with pa-ro is correct, this means that they were attached to the land of the community (the "people"), but where is this land? It cannot be the ko-to-na a-no-no listed separately in the beginning of the Ep 301 without reference to its owner, since it is too small to be a "domain" (1 GRA 1T).

From the equation da-mo - ko-to-no-o-ko in the dispute between the priestess and the "people" recorded on Eb 297/Ep 704.5-6, Lejeune concluded that the twelve ko-to-no-o-ko listed on Ep 301 constitute the community (da-mo)⁴². Their plots however are very small too (from 1 GRA 4T 3V to 3V) and five of them are called o-na-to pa-ro da-mo themselves, so they cannot constitute the "domain" of da-mo. To clarify the picture we have to study more carefully the precise meaning of the word o-na-to. This word is probably related to the term o-no⁴³ with a meaning "ration" or "wages". Both words are derived from the verb ὀνίημι - "to be profitable", and the word o-na-to probably means "land as a profit" or even more likely "plot of maintenance", being thus a very close correspondence to the Sumerian gán-šuku. Throughout the III millennium B.C. these "plots of maintenance" were distributed to the agricultural workers under the obligation to cultivate the "domain land" (níg-en-na, later gán-gu)⁴⁴ of the state or temples. On the other hand, the same word gán-šuku was applied to the "plots of maintenance" held by the priests, high officials and the city-ruler (ensí) himself⁴⁵.

References to the community or the people are extremely rare in economic documents from the Near East. In fact, this institution is far better attested in Mycenaean Greece than anywhere else during

the Bronze Age. Only in the earliest documents from archaic Ur do we find the nearest correspondence to the Mycenaean o-na-to pa-ro da-mo, which is (n₁)-šuku-an-hir-ra - "plot of maintenance attached to the people" (UET II 163, 371). The lands of the free community itself which were not under control of the temple or state are not recorded in the documents found in the major economic archives. We know about their existence only from private contracts of land purchase⁴⁶. It is possible that the lands of da-mo were not recorded in the Pylian archive as well. It is far from certain that we have the information about all the lands even of the best attested village Pakijana (Eb/Ep, En/Eo, Ed series). The totals on the Ed tablets are irreconcilable with the actual amount of land recorded on En/Eo and Eb/Ep series, despite many efforts to reconcile them by juggling the numbers⁴⁷. Several land-holders are only mentioned by name (Parako and Tataro on Eo 224, [Poto?]remata on Ep 539), but no information about their lands is available. da-mo is mentioned among the donors of the tribute to Poseidon on Un 718, but in the corresponding land-register Er 312-880 it does not appear among the land-holders⁴⁸. In this connection the tablet An 830 is interesting (the first five lines are broken):

An 830. 6. a

a-te-re-wi-ja e-so ko-re-te-ri-jo ke-ke-me-no DA 30

7.

8. e-sa-re-wi-ja ro-ro-ni-ja te-u-po-ro[

9. []-no DA 50

10. [] qo-u-ko-ro VIR 18[

11. [qo]-u-ko-ro ra-wa-ra-ti-ja VIR 66

12. o-pi-da-mi-jo pi-*82 qo-u-[ko]-ro VIR 60

13. a₂-ki-ja qo-u-ko-ro VIR 60

Four well-known administrative centres of the Pylian kingdom (Aterewija, Esarewija, Rawaratija, Pi-*82) are mentioned here. The territory of one of them (Pi-*82) is called o-pi-da-mi-jo (ἐμδῆμιος) and 60 ox-drivers (qo-u-ko-ro) are listed there. On line 6 however the territory of Aterewija is characterised by another expression:

e-so ko-re-te-ri-jo ke-ke-me-no - "the interior of the kekemena-type belonging to koreter". e-so probably corresponds to the Greek ἔσω ("inside") and two other words are adjectives, first of which is derived from the title koreter. The feminine form of the second adjective ke-ke-me-na frequently appears in Eb/Ep series where it is found always in the expression ke-ke-me-na ko-to-na, and its meaning is disputed⁴⁹. Here on An 830 land of similar type is mentioned, but it is not measured, only the number of households (DA) under the authority of the local koreter is specified.

We may conclude that, as in the En/Eo series, the main interest of the palace official responsible for the composition of the Eb/Ep land-register was in the control over the relationships described by the pa-ro construction, but unlike the En/Eo series, the domain land of the community (probably under the responsibility of local koreter) remains outside this land-register.

The ka-ma-lands are recorded in the same Eb/Ep series according to a very different principle. The main characteristic of this type of land is the presence of the so-called "formula of obligation" which appears in several variants. The simplest is e-ke-ge wo-ze-ge - "he has and works", or o-u-ge wo-ze - "he does not work". More complex variants of this formula are:

- 1) o-pe-ro du-wo-pi te-re-ja-e e-me-de te-re-ja/o-u-ge wo-ze - "he has to serve with two(twice) but he serves with one (once)/he does not work;
- 2) o-na-to e-ke ... e-pi-ge to-e/to-me te-ra-pi-ge - "he has onato ... and for it he serves(?)⁵⁰".

Outside the ka-ma-land this formula is found only once in connection with the ko-to-na of Kapatija the keybearer (ka-ra-wi-po-ro) on Eb 388/Ep 704, where it has the form: o-pe-ro-sa du-wo-pi wo-ze-e o-u-wo-ze - "she has to work with two (twice), does not work". Neither the exact meaning of different verbs describing "work" or "service" (te-re-ja, te-ra-pi-ke, wo-ze) nor the adverbial use of the numerals du-wo-pi, e-me-de is known.

One thing is however certain: the central authority was interested in the fulfilment or non-fulfilment of the obligations towards this kind of land, which is understandable only in the case of ka-ma-land being directly controlled by the state.

Expressions most similar to this "formula of obligation" are found in one particular group of texts from Umma of the Ur III period: the so-called giš-ur-ra texts⁵¹. These documents record the harrowing of the public land (gan-gu₄). This particular work had to be done two, three or even four times, therefore the giš-ur-ra texts are characterised by the repetition of the expression a-ra-2(3,4)-kam - "twice (3, 4 times)". Text Kang II 121 is particularly interesting since it mentions also a failure to fulfil the work:

- Obv. 1. 1 eše 2 (iku) 11 (sar) iku túk še-kin-/ak 11 (sar) iku-ta
 2. á-érin-na-bi 3½-kam
 3. 2 eše 3 iku giš-ur-a/-ra-2-kam
 4. á-érin-na-bi 20-kam
 Rev. 5. a-sà-e kin-ak ba-UD
 6. nu-uru₄ a-sà é-lugal
 7. ugula ur-mes
 8. kišib lugal-é-mah-e
 9. girì gu-ú-gu-a
 10. iti murú mu hu-hu-nu-ri/^{ki} ba-hul

"1 eše 2 iku 11 sar, ploughed 11 sar per day, their work-force paid as erín for 3½ days.

2 eše 3 iku, harrowed for the second time, their work-force paid as erín for 20 days.

On the field the work ..., (but) the field É-lugal was not ploughed. Foreman Ur-mes, seal of Lugal-emahe, through Gu-ugua.

The fourth month, the year when Huhunuri was destroyed (Amar-Sîn 7)".

I would not insist on the identification of the "work" reported in connection with the ka-ma-land as harrowing, but the interest of the authorities in its fulfilment seems to indicate that ka-ma, unlike

ko-to-na and o-na-to, was public land directly administered by the state. In this case an expression "PN e-ke ka-ma" which alternates with "PN ka-ma-e-u e-ke-ge wo-ze-ge" ("PN has kama/PN is kamaeu, he has and works") does not mean possession of the plot but responsibility over the work done on it.

The three forms of ka-ma holdings (ka-ma, ka-ma o-na-to, and o-na-to pa-ro ka-ma-e-we) fit well into this reconstruction: we can assume that for their supervision over the cultivation of the ka-ma land ka-ma-e-we received "plots of maintenance" called ka-ma o-na-to, but they were cultivated in turn by the holders of o-na-to pa-ro ka-ma-e-we attached to them. There are several further indications that ka-ma, unlike other types of land, was not a family household.

The word ka-ma, denoting in Un 718 a donor of the tribute to Poseidon, corresponds to e-re-mo in the land-register Er 312. The last word can hardly be anything else than the Greek word ἔρημος - "empty, deserted", but it cannot be the wasteland, since it contributes to Poseidon wheat, wine, cheese, and honey. e-re-mo in this case could be an indication that the land is situated outside the territory of the village, like Akkadian eqel sēri ("field of the stepp") as opposed to the eqel āli ("field of the city")⁵², or, alternatively, it could mean that this territory is uninhabited, as opposed to the fields of private households.

Further evidence about the position of ka-ma-e-we is provided by the texts An 261 and 616. Four work-teams called ke-ro-si-ja are recorded there, which consist of four heads of each team, 18 named supervisors, and 50 unnamed workers⁵³. After the totals on An 261 and on the left edge of An 616 is written: ka-ma-e-we VIR 10 - "kama-holders, ten men". Each ka-ma-e-u is thus responsible for five men in addition to their other supervisors⁵⁴.

This type of record is very similar to the Sumerian accounts of agricultural work on public land from Lagash of the Ur III period

where ordinary workers are distributed not only among their supervisors but also among the so-called engar's responsible for each plot of land (gán). For example, three texts MVN VI 368, 399, BM 15406 (unpublished)⁵⁵ deal with the ploughing of two fields a-šà PI.LI.HA and a-šà A-ka-sahar. Workers of different kinds employed there - erín, guruš-hun-gá ("hired men"), hé-dab₅ ("conscripts"), šà-gu₄ ("ox-drivers"), are divided between two supervisors (ugula) and four plots under the responsibility of engar's⁵⁶.

Table XXVIII

text No	MVN VI 368	MVN VI 399	BM 15406	MVN VI 368	MVN VI 399	BM 15406
<u>a-šà</u> PI.LI.HA	<u>ugula</u> Ur- ^d Nu-muš-da			<u>ugula</u> Ur- ^d Ba-Ú		
<u>gán</u> Ur-sa ₆ -ga	22 guruš-hun-gá	20 guruš-hun-gá	9 erín			
<u>gán</u> Ur-mes				14 hé-dab ₅	54 šà-gu ₄	3 hé-dab ₅ 1 guruš-hun-gá
<u>a-šà</u> A-ka-sahar						
<u>gán</u> Lugal-sipa			2 guruš-hun-gá			
<u>gán</u> Ûr-ri-ba-du ₇					12 guruš-hun-gá 12 hé-dab ₅	2 erín 12 hé-dab ₅

Conclusions

As in other Bronze Age societies, in Mycenaean Greece two basic types of land - "domain land" (ko-to-na) and "plots of maintenance" (o-na-to) were carefully distinguished. The Mycenaean agricultural system shares some features with the Hittite and Sumerian systems. The Mycenaean ko-to-na corresponds more or less to the Hittite pir-sahhanas, but the Mycenaean o-na-to is more similar to the Sumerian gán-šuku, since

it was held not only by agricultural workers but also by priests (Ea 776, Eb 399, 472, 477, En 74.16, 609.18, 659.4, Eo 224.8, 247.7, 444.3, Ep 539.13, 704.3) and other persons of high standing (te-re-ta: Eb 159, 369, 747, 846, En 609.15, Eo 224.5, Ep 301.2-4, 613.10).

Several other features are unique for Mycenaean Greece:

- 1) the state control over the land, unlike the Near East, is not attested anywhere outside the ka-ma-land;
- 2) the community (da-mo) is much better attested than in the contemporary Near East, but has some parallels in the earliest documents from first half of the III millennium B.C.

The main interest of the authority responsible for the composition of the Pylian "complex land-registers" seems to be the determination of the relationships between the owners of ko-to-na and the holders of o-na-ta attached to them. The reason for this interest was probably the control over the agricultural manpower (te-o-jo do-e-ro and other groups of do-e-ro) exercised by the central authority. On the other hand, we find several degrees of central control over the land itself:

- 1) the fulfilment or non-fulfilment of the obligations towards the land is carefully recorded in connection with ka-ma-land;
- 2) there is no evidence of state control over the ko-to-na of 13 te-re-ta in the land-register En/Eo, but their size is reported, which probably means that te-re-ta themselves were personally dependent in one way or another on the palace;
- 3) the community land (da-mo) probably was not recorded at all, only some information about o-na-ta attached to it is reported in the land-register Eb/Ep.

All three agricultural systems (Sumerian, Hittite and Mycenaean) had at least one feature in common: large land-holdings were cultivated by the forced labour of agricultural workers who possessed their "plots of maintenance" as a reward for this work. The peculiarity of the Mycenaean system was that the state did not control most of the "domain" land, but only supplied it with the work-force of the population dependent on the palace.

NOTES

1. For the interpretation of these texts as land-holdings, see: E. D. Foster, *The Flax Impost at Pylos and the Mycenaean Land-holding*, Minos 17, 1981, p. 67-121.
2. There is a vast literature on the Pylian E series. Research however has not proceeded very much beyond the fundamental study by E. L. Bennett, *The Landholders of Pylos*, AJA 60, 1956, p. 103-133, where the basic facts about their structure were established.
3. The land is measured by the amount of seed required (ideogram GRA) at Pylos and Tiryns, or by the ideogram PA of unknown meaning at Knossos. The ideogram DA is found in all three archives and about its interpretation see below.
4. J.-P. Olivier, *Quelques ouvrages récents de Mycénologie*, AC 36, 1967, p. 624-625.
5. J. Chadwick, *The Mycenaean World*, Cambridge, 1976, p. 111, 114-115.
6. A. Falkenstein, *Archaische Texte aus Uruk*, Berlin, 1936, No 192.
7. S. Langdon, *Pictographic Inscriptions from Jemdet Nasr*, London, 1928, No. 28, 67, 83, 99, 100, 179.
8. UET II 15, 20, 79, 81A, 82, 87, 89, 94, 98, 102, 104, 106, 108, 109, 111, 113, 116, 117, 122, 128, 135, 136, 140, 141, 143, 147, 151, 152, 153, 155, 160, 161, 163, 164, 168, 171, 175, 181, 184, 187, 191, 193, 202, 204, 206, 208, 211, 213, 227, 291, 306, 356-371.
9. A§ 504-508, 511, NTSS 162, 213, 234, 250, 256, RTC 4, TS 53, 100-102, 112, 133, 173, 230, 242, 274, 463, 486, 506, 521, 526, 568, WF 43-60.
10. A. Deimel, Or. 4, 1924.
11. G. Pettinato, Catalogo dei testi cuneiformi di Tell Mardikh-Ebla, Napoli, 1979, No 211. 220, 848, 877, 893, 910, 1062, 1070, 1075, 1106, 1162, 1205, 1265, 1270, 1282, 1404, 1430, 1581, 1631, 1765, 1779, 1998, 2021, 2041, 2053, 2083, 2218, 2220, 2221, 2223, 2228, 2232, 2309, 2310, 2501, 2966, 4961, 4966, 5014, 5052, 5119, 6267, 6285, 6294, 6352, 6356, 6366, 6392, 6400, 6410, 6474, 6486, 6488, 6489, 6491.

12. For references see: B.R. Foster, Administration and Use of Institutional Land in Sargonic Emar (Mesopotamia 9, 1982 (some of them unpublished) .
13. G. Pettinato, Texte zur Verwaltung der Landwirtschaft in der Ur-III Zeit (An. Or. 45), 1969. There are many more texts of this kind from this period, published and unpublished, Pettinato's edition can be used as a good example.
14. AT 207-219.
15. V. Souček, Die hethitischen Feldertexte, Ar. Or. 27, 1959, p. 5-395.
16. UT 84, 146, 198, 300, 1064, 1079, 1081, 1102, 2026-2032, 2089, 2090.
17. ed. by A. H. Gardiner, Oxford, 1941-52, I-IV.
18. F. M. Fales, Censimenti e catasti de epoca Neo-Assira, Roma, 1973.
19. L. Mitteis, V. Wilcken, Grundzüge und Chresthomatie der Papyruskunde, Leipzig-Berlin, 1912, I 2, 231-240.
20. From Astypalaia: IG XII 3, 180-182, Kos: Cagnat IV 1083, Magnesia: IM 122, Mytilene: IG XII 2, 76-80, Thera: IG XII 3, 343-349, Tralles: BCH 4, 1880, p. 336
21. ed. by J. Morris, Chichester, 1975-83, I-XXXII.
22. N. G. Sworinos, BCH 82, p. 1-145.
23. About these series see: A. Heubeck, Zu den pylischen Es-Tafeln, Sprache 4, 1956, p. 80-95; P. Ilievski, The Recipients of the Es Tablets, Cambridge Colloquium, 1966, p. 238-244; M. Lang, Es Proportions, MS, 1964, p. 37-51.
24. Y. Duhoux, Les mesures mycéniennes de surface, Kadmos 13, 1975, p. 36; P. de Fidio, Il ricapitolativo Ed e i sistemi di misura micenei, Kadmos 22, 1983, p. 14-39.
25. E. L. Bennett, AJA 60, p. 119.
26. On the problem of the "14th te-re-ta" see: Г. Ф. Полякова, Социально-политическая структура пилосского общества, М., 1978, с. 40-54.
27. F. W. Householder, pa-ro and Mycenaean Cases, Glotta 38, 1959, p. 5-6.
28. When Householder wrote his article he was not sure whether the -pi ending can be used with the names of professions (ibid. p. 9 n.1),

but later PY Un 1426 was discovered where the form ki-ri-te-wi-ja-pi does appear.

29. See p. 53, 57.
30. J. T. Killen, The Knossos o-pi Tablets, Atti Roma, 1968, II p. 640-641.
31. K. K. Riemschneider, Die hethitischen Landschenkungsurkunden, MIO 6, 1958, p. 321-381.
32. D. F. Easton, Hittite Land Donations and Tabarna Seals, JCS 33, 1981, p. 8-9.
33. S. Erdem, Le strice di pombo di Kululu, Studia Mediterranea, Pavia, 1979, p. 143-164.
34. K. K. Riemschneider, Zum Lehenswesen bei den Hethitern, MIO 13, 1965, p. 335.
35. F. Imparati, Le leggi ittite, Roma, 1964, p. 56-63, 68-73, 112-113.
36. F. Imparati, Una concessione di terra da parte Tudhaliya IV, RHA 32, 1974.
37. On the meaning of sahhan see: Götze, Neue Bruchstücke zum grossen Text des Hattušiliš, MVAG 34, 1930, p. 54-59; CHD III 1 p. 91.
38. E. Laroche, Mythologie anatolienne, RHA 23, 1965, p. 72.
39. [ŠA] is restored on the basis of LS 2:
 Obv. 7. QA-QA-RA ŠA É^{TIM}
 8. Ü KISLAḪ
 "the land of the 'house' (temple) with the threshing-floor".
 It is worth to notice that threshing-floor (KISLAḪ) is always found on the domain land: LS 3, Obv. 5, 10, 15, 24: KISLAḪ ŠA É.GAL^{LIM} - "threshing-floor of the palace"; JCS 33 p. 8. Obv. 12'-16': 20 IKU Ü-SAL-LUM Ü KISLAḪ ... ŠA É^{<m>} Ta-an-d[a-me-i] - "20 IKU of meadow with the threshing-floor ... of the house of Tandamei".
40. See n. 15.
41. As at Pylos, the land is measured here by the amount of seed (ideogram PA, which is abbreviation of Akkadian capacity measure parīsu) .
42. M. Lejeune, Le damos dans la société mycénienne, REG 78, 1965, p. 1-22 (=MPM III 1972, p. 137-154.).
43. M. Lejeune, Sur quelques termes du vocabulaire économique mycénien,

- MS, 1961, p. 77-109 (=MPM II 1971, p. 287-312).
44. About the Sumerian agricultural terminology see: A. Deimel, Sumerische Tempelwirtschaft (An. Or. 2), 1931, p. 80-81; J.-P. Grégoire, Archives administratives sumériennes, Paris, 1970, p. XVIII; G. Pettinato, Untersuchungen zur neusumerischen Landwirtschaft, Napoli, 1967, I p. 27-31.
45. S. Yamamoto, The lú-KUR₆-dab₅-ba People in the é-mí - é^d-Ba-Ú in Pre-Sargonic Lagash, ASJ 3, 1981, p. 94-95 (table I) n. 8 p. 109.
46. D. O. Edzard, Sumerische Rechtsurkunden des III Jahrtausends, München, 1968, No. 1-20, 106-120.
47. Even the most attractive attempts to reconcile the totals of the ka-ma -land on Ed 239 and the lands of the cultic personnel on Ed 317 with the corresponding Eb and Ep tablets are unacceptable. Both on Ed 239 and on Ed 317 only o-na-ta are counted, while in order to get the required number all sorts of land were counted together (ka-ma, ka-ma o-na-to, o-na-to pa-ro ka-ma-e-we, e-to-ni-jo, ko-to-na, o-na-to pa-ro da-mo). See: M. Lejeune, MPM III p. 107-111; P. de Fidio, Kadmos 22, 1983, p. 23-25.
48. See below, Chapter VI.
49. After Bennett's study it was thought to be the "communal land", later it was proposed that ke-ke-me-na means "fallow" (Y. Duhoux, Aspects du vocabulaire économique mycénien, Amsterdam, 1976, p. 7-27; G. Dunkel, Mycenaean ke-ke-me-na, ki-ti-me-na, Minos 17, 1981, p. 18-29.). Recently M. Carpenter put forward a new interpretation of this word as "open land" on the margin of the inhabited territory (Ki-ti-me-na and ke-ke-me-na at Pylos, Minos 18, 1983, p. 81-88).
50. Only if the verb te-ra-pi-ke is to be identified as the iterative form of the Greek θεραπεύω.
51. An. Or. I 49, 166, VII 239, Kang I 118, 121, 127, MVN I 90, IV 15, V 66, Nik. II 130, 237, 239, 245, NY 61, 63, 372, Or. 44/49 394, TCL V 5676, 6043, UCP IX/2 22.
52. CAD XVI p. 141-143.
53. See p. 57, 73.

54. Beside the word ka-ma-e-we these two tablets are also connected with the E series by the scribal hands: the obverse of An 261 is written by scribe No 43 who wrote also the tablets of the Ea series, but the reverse of An 261 and An 616 is written by scribe No 1, responsible also for the sets Ed, En and Ep.
55. No 10 of Appendix.
56. See also table IX.

VI DA-MO AND DO-E-RO

(conclusions)

We know next to nothing about the upper echelons of Mycenaean society. In sharp contrast to later Greek epigraphic and literary sources, Linear B documents provide little or no information about kingship¹ or political establishment, but they can be regarded as a very rich source for the structure of the productive population of Mycenaean Greece.

It can be demonstrated that this structure was characterised by the dichotomy of two social terms: da-mo and do-e-ro. Both words have securely established Greek etymologies: δᾱμορ - "people"² and δοῦλορ - "slave"³ but, as has been shown several times, the later Greek etymologies are of only limited value for the reconstruction of Mycenaean social institutions⁴. Most dramatically the difference between the two groups of population is underlined by the expression da-mo do-e-ro (KN C 911) - "slave of the people". At Pylos too the difference is evident from the following expression repeated 56 times in the Eb/Ep series: te-o-jo/i-je-re-ja/PN(gen) do-e-ro/a o-na-to e-ke ... pa-ro da-mo - "slave of the god/priestess/PN has plot of land at/from(?) the people".

1. da-mo.

It is known from An 830 and Cn 608 that the territory of the nine administrative centres in the Pylian Hither province was called o-pi-da-mi-jo. Both texts deal with husbandry⁵ and An 830 provides us with the first professional designation of da-mo - "ox-drivers" (go-u-ko-ro)⁶, located at the village Pi-*82. da-mo is also mentioned in connection with three other Pylian villages: Sarapeda (Un 718), Pakijana (Eb/Ep series)⁷ and the unnamed village surveyed in the land-register Ea⁸. None of the 64 persons mentioned by name in the Eb/Ep series can be positively identified as a member of da-mo, this

word being mentioned only with the preposition pa-ro in the expression discussed above. As was shown in the previous chapter, the land of da-mo probably remains outside the Eb/Ep series, where only plots (o-na-ta) attached to it were registered. Nor can any of the land-holders at Sarapeda registered in the land-survey Er can be identified with da-mo of Un 718. The relationship between these two documents has often been misinterpreted⁹. In my opinion, they should be treated in the most simple and straightforward way.

Table XXIX

Sarapeda	Er 312-880		Un 718	
	GRA	%	VIN ¹⁰	%
ekera ₂ wo	94	55	3	50
damo			2	33
wanaka	30	17.6		
rawaketa	10	5.8	S2	11
3 tereta	30	17.6		
worokijonejo eremo/kama	6	3.5	S1	5.5

Thus, da-mo is absent from the land-register Er, while wa-na-ka ("the Lord") and three te-re-ta are not found among the donors of the offerings to Poseidon on Un 718.

In the Ea series we find a slightly different situation. The expression pa-ro da-mo is found twelve times there¹¹, but in the sixteen other occurrences plots of land (o-na-ta) are said to be attached to sh-qo-ta-o/qo-qo-ta-o/me-ri-te-wo ko-to-na - "estate of swine-herd/ox-herd/bee-keeper"¹². In all instances the size of the ko-to-na itself, either of da-mo or of the three individuals, is nowhere indicated. This parallelism in the method of record keeping strongly suggests that the "swine-herd" (οὐβῶταξ), "ox-herd" (βοῦβῶταξ) and "bee-keeper" (μελιτεῦξ) were the individual members of da-mo, thus providing us with three more occupations of this category of the population¹³.

Poliakova in her treatment of the Pylian Cn series¹⁴ drew attention to the fact that two different systems of record were used at Pylos in connection with cattle-breeding in the Cn and Ae series respectively. In the Cn tablets the sex and the species of animals are carefully indicated, but the persons in charge of them ("shepherds") are never specified by professions and the same persons are sometimes reported to be responsible for animals of different species¹⁵. Ae 27, 108, 134, 489, on the contrary are written according to a formula:

PN a₃-ki-pa-ta/po-me o-pi ta-ra-ma-ta-o ge-to-ro-po-pi o-ro-mo-no VIR 1

"goat-herd/shepherd looking after 'quadrupeds' of Taramata, one man". In contrast to the Cn series, animals are called here indiscriminately "quadrupeds", being distinguished only by means of the professions of the shepherds: a₃-ki-pa-ta probably "looks after" goats and po-me (πoμῆν) is in charge of sheep. Yet another consideration can be added: unlike the animals of the Cn series, the "quadrupeds" of the Ae tablets are not counted, only relationships between Taramata and four shepherds being indicated. The last point connects the Ae tablets with the way in which land of the da-mo is treated in the Ea and Eb/Ep series. In both cases the information about the size of the property itself, either land or cattle, remains outside the control of palace officials responsible for the record-keeping, but the relationships of different persons involved are carefully recorded. Having in mind that Taramata himself¹⁶ is one of the land-owners of the Ea series and that alloccupations identified so far for members of da-mo are connected with husbandry, we can add "goat-herd" and "shepherd" to the list.

It follows from the material about da-mo collected up to this point that this category of people was mentioned only indirectly in the land-surveys, but more information about it can be expected from the texts dealing with taxation (since the taxation units were probably called o-pi-da-mi-jo) or other kinds of tribute (offerings according to Un 718). This word however does not appear on Ma or Na tablets which record the delivery of different commodities by taxation units

of different size (18 districts in the Ma series, and about 100 villages in the Na series). Only one text seems to be helpful, as it shows the personal composition of one such a taxation unit, being thus the only Linear B census-list of one small village called incidentally ko-ri-to - Korinthos¹⁷:

- Nn 831. 1. ko-ri-[to ri]-no [[do-so-mo]]
 2. u-re-[u] SA 4
 3. a-mo-ke-re [] SA 1
 4. e-re-e-u SA 2
 5. qo-u-ko-ro [] SA 2
 6. a-ro-je-u [] SA 1
 7. a-mu-ta-wo [] SA 4
 8. e-po-me-ne-u [] SA 4
 9. ko-re-te [] SA 24
 10. po-me-ne [] SA 2
 11. ka-ke-u [] SA 1

"Kori[to fl]ax donation (last word is erased): Ure[u]- 4 SA-units, Amokere - one, Ereeu - two, ox-driver(s) - two, Arojeu - one, Amutawo - four, Epomeneu - four, koreter - 24, shepherds (dual or plural) - two, bronze-smith - one".

The total amount of 45 units of flax represents probably the tribute actually delivered, but not the estimated norm for this village, since according to another text some of the tax-payers listed on Nn 831 were partially exempted from taxation:

- Xn 1357. 1. [to]-sa-de e-ma-a₂ e-re-[u-te-ra SA x]
 2. [to]-sa-de e-po-me-ne-we [e-re-u-te-ra SA x]
 3. [to]-sa-de ka-ke-we e-re-u-te-[ra SA x]
 4. []to-sa-de ko-re-te-re e-re-u-[te-ra SA x]

"[... so] much (flax) is rele[ased](from payment) for Hermes (?) [...], [... so] much is [released] for Epomeneu [...], [so] much is releas[ed] for the bronze-smith [...], so much is relea[sed] for the koreter [...]".

It follows from this fragment that there was a shrine of Hermes (probably with its own personnel)¹⁸ at Korito which was completely exempted from the delivery of flax, but Epomeneu, the bronze-smith and the koreter were only partially exempted, since all three appear also on Nn 831. Both texts combined together would produce a typical Na balance account written according to the formula: "GN SA x to-sa-de ka-ke-we/PN e-re-u-te-ra SA y" - "GN x units of flax, so much is released for the bronze-smith/PN, y units".

Two out of four occupational designations mentioned on Nn 831 qo-u-ko-ro and po-me have already been identified as possibly connected with da-mo. To find koreter among them is not at all surprising, since this title is always found (both at Pylos and Knossos)¹⁹ in conjunction with a particular place-name, including An 830 where it appears alongside qo-u-ko-ro. Bronze-smiths (ka-ke-we), on the other hand, appear on numerous Na tablets (Na 104, 106, 252, 425, 529, 848, 923, 941) in the same position as on Xn 1357, as exempted from their tax duties. Another two occupations.- ku-na-ke-ta-i ("hunters" dat. pl.) and na-u-do-mo ("ship-builders") are found in the same context on Na 248 and Na 568 respectively²⁰.

Thus, the whole list of occupations connected with a different degree of probability with da-mo includes ten professional designations, all of them non-agricultural:

<u>qo-u-ko-ro</u>	"ox-driver"	An 830, Nn 831
<u>qo-qo-ta</u>	"cow-herd"	Ea 270, 305, 757, 802
<u>su-qo-ta</u>	"swine-herd"	Ea 59, 109, 132, 480, 481, 776, 822
<u>me-ri-te-u</u>	"bee-keeper"	Ea 481, 771, 799, 813, 820
<u>a₃-ki-pa-ta</u>	"goat-herd"	Ae 108, 489
<u>po-me</u>	"shepherd"	Ae 134, Nn 831
<u>ko-re-te</u>	"local official"	An 830, Nn 831, Xn 1357
<u>ka-ke-u</u>	"bronze-smith"	Nn 831, Xn 1357
<u>ku-na-ke-ta-i</u> (?)	"hunters"	Na 248
<u>na-u-do-mo</u> (?)	"ship-builders"	Na 568

Finally, in the famous dispute over the legal status of land held by Erita the priestess, one variant (Ep 704) calls the antagonist of the priestess da-mo, but in the other variant he is called ko-to-no-o-ko (Eb 297). This word is not exactly an occupational term, but rather an indication of social status - "owner of ko-to-na". It does not reveal the real occupation of members of da-mo, since, for example, cow-herd, swine-herd and bee-keeper of Ea series all have their own ko-to-na.

The alleged association of these eleven words with da-mo does not mean that all persons described by them necessarily belong to this category of the population. Thus, according to the Jn series beside the ordinary bronze-smiths, there were some designated as do-e-ro and po-ti-ni-ja-we-jo ("of the Lady"); five ko-to-no-o-ko registered on Ep 301 and one shepherd on Ea 824 hold their plots of land pa-ro da-mo which probably indicates that they themselves were not members of the da-mo.

To summarise our discussion of da-mo we can stress the following points:

1. The category of population called da-mo largely remains outside the control of the central authority of Pylos. Neither land nor cattle of da-mo is recorded in the Pylian palatial archive, only the relationships between da-mo and people of other categories being indicated there.
2. The main channel of communication between the central authority and da-mo seems to be taxation (according to the use of the word o-pi-da-mi-jo) and other kinds of tributes (Un 718).
3. It is very difficult to identify the individual members of da-mo, since it usually appears collectively, as a community. As far as such an attempt is possible, the occupations which can be associated with da-mo are all non-agricultural, being connected with husbandry, crafts, and perhaps also hunting.

2. do-e-ro.

If we now turn to another major social category of Mycenaean Greece - do-e-ro, we can find that it is much better attested in the Linear B archives. The obvious Greek etymology of this word δούλος - "slave" rather confuses than helps us to understand the actual position of do-e-ro in Mycenaean society²¹. It is well known that one group of do-e-ro, namely te-o-jo do-e-ro ("slaves of the god"), was the largest group of small land-holders at Pylos²². Contrary to the widespread view, other groups of do-e-ro do not differ essentially from this one. In the same land-register (E series at Pylos) we can find do-e-ro of other gods and "private" do-e-ro side by side with te-o-jo do-e-ro and "free" persons. On Ep 539 and the parallel Eb 1176, 1187, 1188 are recorded holdings of two do-e-ro of the priestess (i-je-re-ja) Erita, one do-e-ro of the keybearer (ka-ra-wi-po-ro) Kapatija, and three do-e-ro of Apimede. The plots of these persons are not attached to the land of their "masters", but are held pa-ro da-mo or pa-ro ka-ma-e-we²³. In the parallel texts En 609 and Eo 224 the holdings of one more do-e-ra of the priestess are recorded. It is interesting to note that the holding of her "mistress" (i-je-re-ja pa-ki-ja-na - priestess of Pakijana) is recorded on the same tablet, and both of them are called o-na-te-re of the same person Amaruta²⁴. On Ed 847 holdings of several unnamed e-ge-si-jo do-e-ro ("slaves of the follower") are separately summarised²⁵. On Es 650 two do-e-ro: Aikiwaro a-te-mi-to do-e-ro ("slave of Artemis")²⁶ and an unnamed we-da-ne-wo do-e-ro ("slave of Wedaneu")²⁷, appear as land-owners in their own right, together with other "free" persons, some of them of high rank²⁸. The parallel records Es 644, 653 do not even mention that Aikiwaro is a do-e-ro.

do-e-ro are found not only as land-holders but also as small cattle-owners. On PY Cn 1287 two do-e-ro, Mutiriko di-u-ja do-e-ro ("slave of the goddess Diwija") and A₂rakawo ke-re-ta-o do-e-ro ("slave of Kereta"), are registered as owners of one goat each, with eight other persons, some of them with professional designations: a-ke-ro

(ἄγγελος - "messenger"), ka-na-pe-u (γναφεύς - "fuller"), ke-ra-me-u (κεραμεύς - "potter"), pe-re-ke-u (meaning unknown). At Knossos an unnamed do-e-ro and his "master" Apiqota are recorded on the same tablet as owners of ten sheep and goats each:

C 915. A [] OVIS^f 10 []
 B [] pa-ro a-pi-qo-ta / pa-ro do-e-ro CAP^f 10 []

"At (the disposal of) Apiqota 10 ewes, at (the disposal of) the 'slave' ten she-goats".

Two texts from Knossos are particularly important for the understanding of the status of do-e-ro: C 911 and 912. Both texts are records of sheep and goats registered against the names of their owners, which specified in three different ways: by another name in the genitive, ethnic (adjective derived from place-name), and one of the three words: do-e-ro, po-ku-ta or wo-we-u. All three possibilities may be combined with one name:

C 911. 10. []-so a-pi-me-de-o po-ku-ta ra-ri-di-jo OVIS^f 140
 "PN pokuta of Apimede from R²⁹ - 140 ewes".

Line 6 is exceptional and it was used as a starting point for our discussion of the da-mo - do-e-ro dichotomy:

C 911. 6. qa-di-ja po-ku-te-ro da-mo do-e-ro CAP^f 70
 "Q slave of the people of pokuta-type - 70 she-goats".

The position of the words wo-we-u and po-ku-ta is so closely parallel to that of do-e-ro in these two texts that whatever their etymology is³⁰, they must denote some social group very similar to do-e-ro, or even components of the "do-e-ro class". The occurrence of all three terms with ethnics only, without references to "owners" (C 911. 3. po-ri-wo su-ki-ri-ta-jo wo-we-u, 8. ra-wa-ni po-ku-ta ra-ri-di-jo, 13. a-ra-ko ra-ri-di-jo do-e-ro), confirms that they were not slaves in the strict sense, but some group of the indigenous

population.

Another word which can alternate with do-e-ro is the social or occupational term ki-ri-te-wi-ja³¹ which is found on PY An 607 in the expression do-ge-ja ki-ri-te-wi-ja parallel to do-ge-ja do-e-ra in the same text³².

Members of these groups of population similar to that of do-e-ro are attested as land-holders too: two wo-we-u are mentioned in the Knossian land-register Uf 836, 1023 (both of them in the district Qara) and ki-ri-te-wi-ja women are found as collective land-holders at Pylos on Eb 321/Ep 704 (holding their plots pa-ro da-mo).

do-e-ro of different types and members of similar social groups are also found in records of work-teams and quotas of conscripts. At Knossos women of the work-teams are called do-e-ra in five texts:

Ai 824. 1. a-pi-qo-i-ta do-e-ra MUL 32 ko-wa me-zo-e 5 ko-wa me-wi-jo-e 15

2. ko-wo me-wi-jo-e 4

Ai 1036. 1. [] *56-so-jo a-mi-ni-so / do-e-ra

2. []

Ak(2) 7024. 1. [] 2 []

2. [] ko-wo me-[]

3. [] do-e-ra MUL []

Ap 628. 1. A

1. B []-ja a-ke-wo do-e-ra MUL 4 [ko] []

2. []-ro do-e-ra [MUL] 1 di-qa-ra []

3. []-ne-o do-e-ra MUL []

Gg 713 ma-ri-ne-we / do-e-ra 'ME+RI' *209+A []

The last text is not a record of the work-team, strictly speaking (it deals with the distribution of honey), but [ma]-ri-ne-wo wo-i-ko ("house of Marineu") appears on As 1519 as the location of a male work-team, and on TH Of 25, 35, the word ma-ri-ne-we-ja-i (dat. pl.) describes a group of women as recipients of wool in a textile context.

Three groups of ki-ri-te-wi-ja-i (dat. pl.) from Knossos, Amnissos and Phaistos are recorded on KN E 777 as recipients of 100 large measures of grain each for one month. They are recorded in this text together with a-ze-te-ri-ja, the Knossian equivalent of a-ke-ti-ri-ja, one of the most frequent female occupational terms used at Pylos, Knossos and Thebes to describe women working in the textile industry³⁵.

Only one group of texts from Knossos (Ai 1037, 5976, 7745, B 822, 988) speaks in favour of the servile status of do-e-ro. All these texts use the verb qi-ri-ja-to, and comprise the formula:

PN₁(nom.) qi-ri-ja-to PN₂(acc.) PN₃(gen.) do-e-ro/a VIR/MUL 1

Since qi-ri-ja-to hardly could be anything else than the Mycenaean form of Greek (ἐ)πρίτω - (he) bought (3 sg. aor. II med.), its generally accepted translation is: "PN₁ bought PN₂ slave of PN₃". If this interpretation is correct, we can assume that Mycenaean do-e-ro, like the word δούλοι in later Cretan epigraphic sources (Code of Gortyn IC IV 72) covers both purchase slaves called in classical Crete χρυσώνητοι (Athen. VI 263 e-f) and a serf-like population called by Cretan authors μνοία and ὑφαιμῶται (Hybrias PLG III 651 ap. Athen. XV 695 f, Sosicratos FGH 461 Fr. 1 ap. Athen. VI 263 f, Dosiades FGH 458.Fr. 3 ap. Athen. ibid.), or κλαρῶται - by Greek writers from outside Crete (Callistratos FGH 348 Fr. 4 ap. Athen. VI 263 e, Ephoros FGH 70 Fr. 29 ap. Athen. ibid.)³⁶. At Pylos, for example, when group of 13 do-e-ra was transferred from one superior to another (An 607) they are said to be simply "sent" (e-e-to) to their new "masters"³⁷.

To sum up, Mycenaean do-e-ro, unlike classical δούλος, seems to denote some social group independent economically (land- and cattle-owners), but dependent in some uncertain way on private persons (if they are not representatives of the central administration), gods (named and unspecified θεός in the expression te-o-jo do-e-ro), and da-mo. The members of this group of population were also subject to conscription in order to work in teams, and it is very important to

notice that the same components of the "do-e-ro class" are found both as land-holders and as members of work-teams.

Table XXX

personal status	land-holders	work-teams
teojo/teo doero	PY Eb/Ep, En/Eo series	KN A1 966
ijereja doera	PY En 609, Eo 224	PY Ae 303
karawiporojo/kapatija doera ³⁸	PY Ep 539	PY Ae 110
kiritewija	PY Eb 321, Ep 704	KN E 777

Only small portion of persons mentioned in the Linear B archives can be positively identified as members of either the da-mo or the do-e-ro classes. Is it possible to determine the social status of those numerous workers and conscripts who are listed by names, ethnics or professions?

Here again the village of Korito comes to our help. On Ad 921 a team of te-pe-ja-o ko-wo ("sons of te-pe-ja women") is registered at ko-ri-to. On An 209 thirteen personal names are listed under the heading ko-ri-si-jo ta-te-re, and on An 207, which is a list of conscripts, unknown number of "tailors" (ra-pte-re) with the same ethnic appear among other professional groups from different places. ko-ri-si-jo is probably an ethnic derived from the place-name ko-ri-to (Κορίνθιοι)³⁹, ra-pte-re and te-pe-ja are both connected with the textile industry, since the last word is attested as a female occupation in the textile context at Knossos (Le 641) and Thebes (Of 35), and ta-te-re is connected with sheep-breeding, being an occupational term derived from the word ta-to-mo (ταθμός) found on Cn 4 and 395⁴⁰.

Thus, the whole population of Korito, as it is recorded in the Pylian archive⁴¹, has the following structure:

Korito

(I) taxation records (Nn 831, Xn 1357) (II) work-teams and conscripts
(Ad 921, An 207, 209)

<u>da-mo</u> (?)	<u>do-e-ro</u> (?)
1 <u>ko-re-te</u>	31 (?) <u>te-pe-ja-o</u> <u>ko-wo</u> ⁴²
1 <u>ka-ke-u</u>	13 <u>ta-te-re</u>
1 (?) <u>go-u-ko-ro</u>	[] <u>ra-pte-re</u>
2 (?) <u>po-me-ne</u>	
6 PN	

As can be seen from this representation, none of the occupations of group (II) appears in group (I), which was previously identified as possibly connected with da-mo. There are several reasons for the possible identification of workers in group (II) as members of the "do-e-ro class" (in a broad sense):

- 1) women and their children recorded in the Aa, Ab, Ad series at Pylos are more likely to be members of this class, since in the parallel Ai, Ak, Ap series at Knossos they are sometimes called do-e-ra (Ai 824, 1036, Ak 7024, Ap 628);
- 2) the word ta-te-re is connected with the Cn series (through the term ta-to-mo)⁴³, which seems to record cattle of the centralised "household" in the framework of the whole Pylian state⁴⁴;
- 3) five groups of ra-pte-re are listed on An 207 side by side with a team of po-ku-ta who have already been identified as members of the "do-e-ro class";
- 4) three individual ra-pte Tiridaro, Ero₂qo and Zepu₂ro appear in the Ea series (Ea 28, 29, 56, 325, 460, 754, 813) as small-holders whose plots are attached to estates of private persons (Ea 29, 56, 754), da-mo (Ea 460), and the "bee-keeper" (Ea 813) in a way parallel to the description of holdings of various do-e-ro in the Eb/Ep, En/Eo series.

Let us examine more carefully An 207, since it seems to be one

of the most representative conscription records:

An 207. 4. []	VIR 10
5. [] pi-ri-je-te-re	VIR 2
6. [re-ka-ta]	-ne a-de-te-re	VIR 2
7. re-ka-[ta]	-ne ke-ra-me-we	VIR 2
8. re-ka-ta-ne	da-ko-ro	VIR 12
9. wa-a ₂ -te-we	po-ku-ta	VIR 10
10. a-nu-wa	ku-ru-so-wo-ko	VIR 4
11. []-ko	me-ri-da-ma-te	VIR 2
12. []-jo	to-ko-so-wo-ko	VIR 5 [
13. a-pi-no-[e-wi-jo]	VIR [
14. so-ro-pe-o	ra-pte-re	[VIR
15. ko-ri-si-jo	ra-pte-re	[VIR
16. ka-ro-ke-e	ra-pte-re	[VIR
17. ra-ni-jo-ne	ra-pte-re	VIR [
18. []-ka-si-da	ra-pte-re	VIR 20

"[...]ten men, sword-makers from⁴⁵ [GN] two men, irrigators(?)⁴⁶ from [Rekata]ne two men, potters from Reka[ta]ne two men, dakoro from Rekatane twelve men, pokuta from Waa₂tewe ten men, gold-smiths from Anuwa four men, meridamate from [GN] two men, arrow-smiths from [GN] five men, [...] from Apino[ewijo x] men, tailors from Soroepo [x] men, tailors from Korito [x] men, tailors from Karokee [x] men, tailors from Ranihone [x] men, tailors from [GN] 20 men".

Among the nine professions mentioned here, pi-ri-je-te-re are attested as members of the "household" recorded on An 7 and Fn 1427⁴⁷; a-de-te-re appear as land-holders on Eq 36; "potters" (ke-ra-me-we) is the occupation of one of the te-re-ta mentioned on En 467/Eo 371⁴⁸; da-ko-ro appear in two other lists of conscripts (An 424, 427⁴⁹; po-ku-ta were already discussed in connection with do-e-ro (p. 174, 176); me-ri-da-ma-te (and the variant me-ri-du-ma-te) appear in conscription lists (An 424, 427) and in records of another "household" (An 39, 594, Fn 50)⁵⁰; ra-pte-re are found in quotas of conscripts at Pylos

(An 172, 298, 424)⁵¹ and Knossos (V 159), and they were already mentioned as land-holders in the Ea series (p. 179).

Thus, again we face the situation similar to that reflected in Table XXX: the occupations attested for the land-holders appear also in the records of conscription. In the case of An 207 they are a-de-te-re, ke-ra-me-we and ra-pte-re. The most interesting thing is, however, that the professions of large land-owners (te-re-ta) and small-holders (o-na-te-re) appear in the same list (ke-ra-me-we and ra-pte-re). This is not an exception or a coincidence: at Knossos te-re-ta appear in quotas of conscripts together with "carpenters" (te-ko-to-ne, Am 826), "planters" (pu₂-te-re) and "tailors" again (both on V 159).

The assumption that te-re-ta at Knossos differed from those at Pylos⁵² cannot help much: at Knossos too te-re-ta are found as land-holders (Uf 839, 970, 980, 990), and at Pylos, as we just have seen, men with the same professions as te-re-ta appear in lists of conscripts, not only on An 207, but also on An 424 where te-u-ta-ra-ko-ro is found⁵³. The third attested occupation of te-re-ta - "fuller" (ka-na-pe-u, Eo 269) is found on Cn 1287 together with two do-e-ro (p. 173-174). These observations are so strongly contradicted by everything that has been written so far about te-re-ta⁵⁴ that we must pause in our preoccupation with the Mycenaean material and try to understand what the "do-e-ro class" really was in a broader context of other Bronze Age societies.

3. Conclusions

Thanks to the collective efforts of many scholars and above all Djakonov and Gelb, it became clear that the social structure of many Near Eastern societies in the III and II millennia B.C. was characterised by the coexistence of two major groups of population: (I) independent members of free rural communities, and (II) dependent rural population under the direct authority of the state⁵⁵. Group (I) is attested mainly in legal documents, but it is scarcely mentioned in large state or

temple archives, so that even the fragmentary information about da-mo found in Linear B documents looks an exceptionally rich source about population of this type. Group (II) includes such social classes as Sumerian guruš, Old Babylonian muškēnum, Middle Egyptian hmw nsw and Ugaritic bnš mlk⁵⁶. To find some members of the upper class in this group of the population is not at all surprising, since a large part of the governmental bureaucracy was recruited not from members of the free community, but from the population dependent on the state. The following words of Djakonov can be fully applied to Mycenaean te-re-ta: "Apart from labourers creating material wealth in the form of food and clothing, the state sector embraces also other royal and temple servants: functionaries ... , professional warriors, master craftsmen etc. Many of them were in a position to reach a very high standing in society and had practically a share in the income from the exploitation of the lower group of the royal personnel"⁵⁷.

The best analogy to the da-mo - do-e-ro relationship is found in the Middle Assyrian institution of ālājāu. This social term is derived from the word ālu - "community" and it is found usually in a construction PN₁ ālājāu of PN₂⁵⁸. It means not a "community member", but a dependent person who carried on a corvée service (ilku) instead of his master, a real community member⁵⁹.

It seems likely that, contrary to the Ugaritic evidence, the similarity in the approach towards the taxation and conscription found in Linear B documents (for example PY Ac and Ma series)⁶⁰ does not mean that members of da-mo were really summoned for their service, but rather that they sent their do-e-ro (like any other commodities). do-e-ro however cannot be called slaves in any sense, and least of all according to the Marxist definition (used by Djakonov), since they possessed their own "means of production" i. e. plots of land. On the other hand, the relationships between do-e-ro and their "masters" (including members of da-mo) were controlled by the state, or at any rate, these relationships were the matter of great importance for those responsible for the composition of the Mycenaean palace archives.

The distinction between such groups of population as da-mo and do-e-ro probably goes back to the very primitive conditions surrounding the origins of agriculture which, as a direct continuation of food gathering, was regarded as a women's occupation. The first men assigned to the agricultural work were probably members of defeated tribes or prisoners of war⁶¹. It is a great temptation to use the ethnographic material of modern primitive societies or at least of those described by Europeans in the past, in order to verify our reconstructions of ancient social institutions. Any such attempt encounters the difficulty of a methodological character: all our reconstructions are based solely on documentary evidence, but nearly all pre-colonial societies of Africa, America or Oceania were illiterate, and even those of them which developed some form of writing did not leave economic archives suitable for comparison. Methodologically, however, documents should be compared with documents first, and only then, if they are found similar, reconstructions can be compared with descriptions.

The only possible exception could be Easter Island where a local script known as kohau rongu-rongu was developed. According to the latest attempt at its decipherment made by Fedorova⁶² some of the surviving inscribed wooden tablets from this island contain, contrary to all expectations, not mythological or ritual compositions, but various lists. I am of course not in the position to judge the validity of this decipherment, but its results fit so well into the general history of writing (which developed both in Mesopotamia and Crete primarily for the purpose of account keeping) that this consideration alone encourage me to consider seriously Fedorova's conclusions.

According to Fedorova, two tablets: a Santiago small tablet and a London tablet (which are duplicates) contain a list of people called kio. If this interpretation is correct, here for the first time arises the possibility of linking written documents with the descriptions made by European travellers of the XVIII-XIX centuries. The social class of kio is thus described by Métraux:

"The kio were defeated people who were obliged to serve their conquerors or to pay tribute to them with the produce of their lands. Roussel translates kio to mean farmer or servant. On Mangareva a kio was a farmer who had put himself under the protection of a rich landowner or who cultivated a piece of land leased to him by some wealthy man. The kio were the lowest class of small farmers.

After a tribe had been defeated, those who were not killed and eaten were reduced to the condition of kio. Their suffering and humiliation have been described by Roussel (190, p. 424) whose information seems to have been obtained first-hand"⁶³.

Lists of kio from Easter Island probably record the booty taken during the inter-tribal wars on the island⁶⁴, not dissimilar from the Hittite lists of NAM.RA, for example⁶⁵. When conditions of such people like Eastern Polynesian kio became permanent, they could provide one of the sources of such social class as Mycenaean do-e-ro.

We are in a much better position concerning the ultimate fate of Mycenaean social institutions than in respect to their origins. The da-mo - do-e-ro dichotomy survived the destruction of the Mycenaean civilisation. Both on Crete and in Southern Peloponnese of the classical period we find highly organised communities of δᾶμοι and dependent population called on Crete still by its Mycenaean name - δῶλοι, or εἰλωτες in what later became Sparta (Laconia and Messenia).

Unlike their Mycenaean forerunners, however, helots and other similar groups of dependent peasants of Classical Greece were no longer organised in work-teams. They were assigned to κλῆροι of their masters (hence one of the Cretan social terms - κλωρωται) and paid to them a tribute according to a fixed rate⁶⁶.

We find a very similar development in Mesopotamia after the downfall of the Third Dynasty of Ur. During the following Old Babylonian

period the distinction between free community members (awīlum) and dependent peasants (muškēnum) continued to exist, but public land was not cultivated by work-teams of conscripted labour, as in the III millennium, but was divided into family plots of muškēnū who paid a tribute to the Crown⁶⁷.

This observation explains why several very close parallels to Mycenaean documents were found in Ur III archives. Among them the most important are those parallels which enable us to identify the o-ka and the ke-ro-si-ja tablets and Aq series as possibly records of agricultural work. These parallels should not be overestimated, however. The Mesopotamian alluvial plain was very different physically compared with the hills and small valleys of Greece. The "palace economy" was wiped out in Greece after the destruction of the Mycenaean citadels, while it continued to exist in different forms throughout most of Mesopotamian history.

The real parallel to Mycenaean society was probably the Hittite Empire. Unfortunately, the loss of the economic archives of the Empire period restricts severely the prospects of the comparison. Nevertheless, even among only five surviving Luwian hieroglyphic documents (Kululu lead strips) one (strip No 2) was found to be the most exact parallel to one of the Pylian ration lists (Fn 187). The discovery of the Kululu lead strips is also important from another point of view: knowledge of their formulary made easier to identify more Hittite cuneiform texts as based upon genuine economic documents. A large part of such texts belong to the cultic sphere, since most of the wooden tablets which were recapitulated in the cuneiform script were temple inventories. Nevertheless, the only close parallel to such a peculiar feature of any given society as land tenure, is found also among the Hittite documents.

Texts from Ugarit and Alalakh, on the contrary, were found to be much less useful than might have been expected. Though these texts undoubtedly belong to very similar categories, they are arranged usually

in a different way. In the Linear B archives there are no lists of households or census-lists so typical of Alalakh⁶⁸. Neither the gt structure nor the "guild-organisation" which are the most characteristic institutions of Ugarit⁶⁹ can be identified in the Mycenaean material.

Of course the present research was limited to the problems of manpower as they are reflected in lists of personnel, ration lists, and land-registers. Many important documents, such as texts dealing with the textile industry, organisation of bronze-smiths or distribution of weapons, remain beyond of its scope. Utilisation of these texts can bring significant corrections to the conclusions offered here.

NOTES

1. J. T. Hooker, The wanax in Linear B Texts, Kadmos 18, 1979, p. 100-111.
2. The principal studies of da-mo are: M. Durante, Etymologie Greche: δαί/daiqota; δῆμος/damo; δῶ/dopota; μολός/ἄμολῶ, SMEA 11, 1970, p. 49; M. Lejeune, Le damos dans la société mycénienne, REG 78, 1965, p. 18-21 (=MPM III, 1972, p. 135-154); K. Wundsam, Die soziale Struktur in der mykenischen Residenzen nach den Linear B Texten, Wien, 1968, p. 153-165; Г. Ф. Полякова, Социально-политическая структура пилосского общества, М. 1978, с. 249-258.
3. A. Tovar, Indo-european Etymology of Doero, Acta Mycenaea, II p. 324.
4. The best example is qa-si-re-u - βασιλεύς.
5. Cn⁶⁰⁸ has a heading: jo-a-se-so-si si-a₂-ro o-pi-da-mi-jo - "opidamijo (pl.) will feed pigs", followed by the list of nine "towns" of the Hither province registered against a certain number of pigs (ideogram SUS+SI = sia₂-ro). An 830 was discussed in the previous chapter (p. 156-157).
6. go-u-ko-ro - βουκόλος is translated here as "ox-driver" to distinguish this word from go-go-ta - βοῦβότας - "ox/cow-herd". See: M. Lindgren, The People of Pylos, Uppsala, 1973, II p. 131-132.
7. This place-name in fact is not mentioned on Eb/Ep tablets, they are usually supposed to be connected with Pakijana because of their prosopography which is common with the En/Eo series. See: M. Lejeune, Le recapitulatif du cadastre Ep de Pylos, Cambridge Colloquium, p. 260-264 (=MPM III, 1972, p. 107-111).
8. For suggestions see: L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford, 1969, p. 220; L. Deroy, M. Gérard, Le cadastre mycénien de Pylos, Rome, 1965, p. 31.
9. Documents², p. 265; M. Lejeune, Le dossier sa-ra-pe-da du scribe 24 de Pylos, Minos 14, 1975, p. 60-76; M. Lindgren, op. cit. II p. 153-154. I see no possibility for the identification of wa-na-ka with e-ke-ra₂-wo, as well as no evidence for the identification of da-mo either with three te-re-ta or a-ki-ti-to.
10. Wine was chosen for comparison as it is the only commodity delivered by all four donors of Un 718.

11. Ea 52, 59.4,7, 136, 258, 259, 460, 773, 778, 808, 816, 824.
12. With pa-ro: Ea 822, with "genitival construction": Ea 59.3, 109, 132, 270, 305, 480, 481 (twice), 757, 771, 776, 799, 802, 813, 820.
13. su-go-ta - M. Lindgren, op. cit. II p. 139; go-go-ta - ibid. p. 130; me-ri-te-u - ibid. p. 97.
14. Г. Ф. Полякова, Социально-политическая структура ... с. 209-211.
15. For example: sheep and goats with Maranijo and Kukaraso (Cn 643, 719, both at the same place - Pi-*82), Netijano (Cn 40, 599 at Wanojo wowo), Mara (Cn 328.8,9), Awekeseu (Cn 285.5,6); sheep and pigs with Ezoro (Cn 40, 599) and Qetako (Cn 45, 600, 570).
16. Ea 336, 778, 821, 825; M. Lindgren, op. cit. I p. 114.
17. The identification of Pylian ko-ri-to with the Isthmian Corinth is nevertheless defended by B. Sergent in his, *Pylos et Corinthe*, Minos 17, 1981, p. 35-66.
18. According to Tn 316 e-ma-a₂ receives one man (VIR 1).
19. M. Lindgren, op. cit. II p. 84-86; at Knossos: C 902, V 865.
20. Na 248. a. e-re-u-te-ro
ta-mi-ta-na ku-na-ke-ta-i SA 30
"Tamitana, released (from payment) for hunters 30 (units of flax)".
Na 568. A. e-sa-re-u ke-⟨u⟩-po-da e-re-u-te-ro-se SA 50
B. []-wa SA 20 to-sa-de na-u-do-mo o-u-di-do-si
"GN 20 (units of flax), so much ship-builders do not give, Esareu Keupoda released 50 (units of fax)".
21. The principal studies on the position of do-e-ro in Mycenaean Greece are: M. Lejeune, *Textes mycéniens relatifs aux esclaves*, Historia 8, 1959 (=MPM II, 1971, p. 63-81); M. Lindgren, op. cit. II p. 36-39; K. Wundsam, op. cit. p. 169-179; Г. Ф. Полякова, Социально-политическая структура ... с. 135-145, 172; Я. Ленцман, Рабство в микенской и гомеровской Греции, М. 1963.
22. A. Tovar, *Talleres y oficios en el palacio de Pylos: teojo doero-ra, 'domestico-a del rey'*, Minos 7, 1961, p. 101-122. For further references see: M. Lindgren, op. cit. II p. 38-39.
23. M. Lindgren, op. cit. II p. 70-71.
24. He is te-re-ta, see: ibid. I p. 25, II p. 144-145.

25. M. Lejeune identifies them with three "slaves of Apimede" on Eb 1187, 1188/Ep 539 (MPM III p. 105-111).
26. For a discussion of this name see: C. Sourvinou, A-TE-MI-TO and A-TI-MI-TE, Kadmos 9, 1970, p. 43; T. Christidis, Further Remarks on A-TE-MI-TO and A-TI-MI-TE, Kadmos 11, 1972, p. 125-128; A. M. Jasink Ticchioni, Contributi micenei, SMEA 21, 1980, p. 221.
27. On Wedaneu see: P. Ilievski, The Recipients of the Es Tablets, Cambridge Colloquium p. 238-244; M. Petruševski, Diwijeu, Pereuronijo - Diwijewe, Wedanewe, ŽA 15, 1965, p. 136; M. Lindgren, op. cit. I p. 127-128, II 134-136.
28. For example a-re-ku-tu-ru-wo who is e-ge-ta according to An 654, see: M. Lindgren, op. cit. I p. 31.
29. This place-name is not attested elsewhere, but it alternates with an attested toponym, such as su-ki-ri-ta.
30. wo-we-u may be somehow connected with the word wo-wo (Greek ὄρος - "boundary"). The etymology of po-ku-ta is completely obscure, and it may be of non-Greek origin. See: M. Lindgren, op. cit. II p. 118-119, 159.
31. This word may be connected with the Greek word for barley κριθή, but other interpretations are possible, see: ibid. II p. 81-82.
32. See p. 126.
33. The purpose of these three texts is uncertain, "slaves of Korudaro" are said to be o-pi pe-me ("in charge of x" or "at PN" ?), "slaves of the priestess" are e-ne-ka ku-ru-so-jo i-je-ro-jo ("on account of the sacred gold"), and Ae 110 is broken in the middle of the word do-e-[ro/a].
34. See p. 56.
35. See p. 49.
36. On Cretan dependent population see: E. Kirsten, Das dorische Kreta, I Die Insel Kreta im fünften und vierten Jahrhundert, Würzburg, 1942, p. 97-119; D. Lotze, μεταξύ ἐλευθέρων καὶ δούλων, Berlin, 1959, p. 4-25; R. F. Willetts, Ancient Crete, A Social History, London, 1965, p. 95-102; Aristocratic Society in Ancient Crete, London, 1955, p. 33-56.
37. See p. 124-127.

38. Kapatija is "keybearer" (ka-ra-wi-po-ro) according to Eb 388/Ep 704.
39. M. Lejeune, L'assibilation de l'aspirée sourde dentale devant I, Atti Roma, 1969, p. 733-743 (MPM III, p. 225-235).
40. See p. 51, n. 61 for Chapter II(p. 98).
41. This of course does not mean that it is the whole population of Korito.
42. The numeral "30" is erased. Does it mean that they were released from service? There are no corresponding Aa and Ab tablets.
43. Two of the names of An 209 in fact appear on Cn 328, 719 (ra-mi-ni-jo) and Cn 655 (o-pe-re-ta).
44. Г. Ф. Полякова, Социально-политическая структура ... с. 2II-2I2.
45. All place-names are in the dative singular, and in the Mycenaean dialect the locative and the ablative are not distinguished in the singular, so it can mean either "at" or "from". The presence of at least one ethnic in -jo on line 15 (and possibly one more on line 12) suggests that these place-names stand for the indication of the origin of workers.
46. M. Lindgren, op. cit. II p. 16.
47. See Table XVI p. 89.
48. ke-te-na ... ke-ra-me-wo wa-na-ka-te-ro - "estate of the potter of the Lord".
49. See Table XIV p. 86.
50. See ibid. and Table XVII p. 90.
51. Table XIV.
52. J. L. Melena, Review of Knossos Tablets IV, Minos 13, 1972, p. 103.
53. M. Lindgren, op. cit. II p. 145-146.
54. They were proposed to be "barons" (L. R. Palmer, The Concept of Social Organisation in Indo-European, Hommage à Max Niedermann, Bruxelles, 1956, p. 259-261), "initiation priests" (F. R. Adrados, El culto real en Pylos y la distribución de la terra en época micénica, Emerita 24, 1956, p. 353-416), "magistrates" (L. Deroy, M. Gérard, op. cit. p.79), "heads of clans" (А. И. Тюменев, Терета пилосских надписей, ВДИ № 4, 1954, с. 24-32.
55. I. M. Djakonoff, Socio-Economic Classes in Babylonia and the Babylonian Concept of Social Stratification, CRRAI XVIII, 1972,

p. 41-52; Slaves, Helots and Serfs in Early Antiquity, Wirtschaft und Gesellschaft im Alten Vorderasien (ed. J. Harmatta, G. Komoróczy), Budapest, 1976, p. 45-78; I. J. Gelb, From Freedom to Slavery, CRRAI XVIII, 1972, p. 81-92.

56. I. M. Djakonoff, Wirtschaft und Gesellschaft ... p. 58-59.

57. I. M. Djakonoff, CRRAI XVIII, p. 43-44.

58. KAJ 7, 167, KAV 1 VI 52 (Middle Assyrian Law Code § 45), AO 20.154 (Assur 3, p. 19-20).

59. M.-J. Aynard, J.-M. Durand, Documents d'époque Médio-Assyrienne, Assur 3, 1980, p. 23-29; J. N. Postgate, Land Tenure in the Middle Assyrian Period: a reconstruction, BSOAS 34, 1971, p. 496-497;

И. М. Дьяконов, Развитие земельных отношений в Ассирии, Л. 1949, с. 69-72.

The original view of Djakonov was misinterpreted by Postgate.

It does not follow from Djakonov's analysis that "if they (community members A.U.) had not done this (transferred their obligations to ālāiāu A.U), they would themselves have liable ... to ilku ša ālāiūti 'service of community membership'" (BSOAS 34, p. 496-497).

In the Russian text of Djakonov's book it is explicitly stated that community obligations were normally performed by ālāiāu and not by community members: "We witness here the emergence of the class of people owning land in the community, but not performing any obligations, and class of dependent personnel working on their own land and on the land already passed to rich community members, performing all obligation, for themselves and for their masters" (p. 72, my translation).

60. See Table XV p. 88.

61. G. Hunt, Wars of Iroquois, Madison, 1960, p. 7.

62. И. К. Федорова, Исследование рапануйских текстов, Забытые системы письма, М. 1982, с. 66, Тексты острова Пасхи, СЭ №1, 1983, с. 42-53.

63. A. Métraux, Ethnology of Easter Island, Honolulu, 1940, p. 139.

64. Apart of the list of kio Santiago small tablet seems to contain list of edible plants (aka-ruma), pearl chest decorations (nuku-rei) and human victims (iku). И. К. Федорова, Забытые системы письма, с. 56, 62, 71.

65. HT 4, KBo XII 52, 53, KUB XXVI 54.
66. 82 medimni of grain, according to Plutarch (Lyc. VIII) .
67. B. Kienast, Zu muš^ukēnum = maulā, CRRAI XVIII, 1972, p. 99-103;
H. Klengel, Einige Bemerkungen zur Sozialökonomischen Entwicklung
in der Altbabylonischen Zeit, Wirtschaft und Gesellschaft ... 1976,
p. 249-257; J. Klíma, Im ewigen Banne der muš^ukēnum-Problematik?
Wirtschaft und Gesellschaft ... p. 267-274; CAD X 2, p. 272-276.
68. Lists of households: AT 185-202, census-lists: AT 128-178.
69. M. Heltzer, The Internal Organization of the Kingdom of Ugarit,
Wiesbaden, 1982, p. 49-79, 80-102.

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APPENDIX

The following are thirteen Sumerian and Babylonian texts which were discussed, quoted or otherwise mentioned. The texts are presented in cuneiform copy, transliteration and translation. BM 15245 and BM 16453, which were already transliterated and translated in the main text (pp. 33 and 131 respectively) are given in cuneiform copy only.

No 1 (BM 28417)

- I. 1. [13 (?) gemé] 100 (silà)-ta
2. [149 (?)] gemé 60 (silà)-ta
3. [6]84 gemé 40 (silà)-ta
4. [2]00 lá-1 gemé 30 (silà)-ta
5. [2]00 lá-1 dumu 20 (silà)-ta
6. [1]41 dumu 15 silà-/ta
7. []4 dumu 10 (silà)-ta
8. [52] gemé-šú-gi₄ /20 (silà)-ta
9. še-bi 181 (gur) 45 /silà-gur
10. gemé-uš-bar-me
11. 3 gurus 60 (silà)-ta
12. 2 gurus 50 (silà)-ta
13. 2 gurus 40 (silà)-ta
14. še-bi 1 (gur) 60 (silà)-gur
15. un-í1-é-uš-/bar-me
16. še-ba-iti-da
17. 11 gurus 4 gur-ta
18. 6 gurus 2 (gur) 120 (silà)-ta
19. [1 gur]uš 2 (gur)-[ta]
- II. 1. 2 lú-gu 2 (gur) 120 (silà)-ta
2. 1 tug-du₈ 2 (gur) 120 (silà)-gur-<ta>
3. še-bi 102 gur

- I. 1. [13 women] per 100 (quarts)
2. [149] women per 60 (quarts)
3. [6]84 women per 40 (quarts)
4. [19]9 women per 30 (quarts)
5. [19]9 children per 20 (quarts)
6. [1]41 children per 15 quarts
7. []4 children per 10 quarts
8. [52] old women per 20 (quarts)
9. their barley 181 bushel 45 quarts
10. they are female weavers
11. 3 men per 60 (quarts)
12. 2 men per 50 (quarts)
13. 2 men per 40 (quarts)
14. their barley 1 bushel 60 quarts
15. they are un-í1 of the house of the weavers
16. monthly barley rations
17. 11 men per 4 bushels
18. 6 men per 2 (bushels) 120 (quarts)
19. [1 m]an [per] 2 (bushels)
- II. 1. 2 flax-workers per 2 (bushels) 120 (quarts)
2. 1 tailor per 2 bushels 120 (quarts)
3. their barley 102 bushels

4. nu-dab ₅ -me	4. they are not holding (plots of land)
5. še-ba-zag-mu-ka	5. annual barley rations
6. šà-gír-su ^{ki}	6. at Girsu
7. 31 gemé 30 (silà)-ta	7. 31 women per 30 (quarts)
8. 1 dumu 20 (silà)-ta	8. 1 child per 20 (quarts)
9. 10 dumu 15 silà-ta	9. 10 children per 15 quarts
10. 5 dumu 10 (silà)-ta	10. 5 children per 10 (quarts)
11. še-bi 3 (gur) 20 (silà)-gur	11. their barley 3 bushels 20 (quarts)
12. šà-URUxKÁR ^{ki}	12. at URUxKÁR
13. 12 gemé 40 (silà)-ta	13. 12 women per 40 (quarts)
14. 74 gemé 30 (silà)-ta	14. 74 women per 30 (quarts)
15. 10 dumu 20 (silà)-ta	15. 10 children per 20 (quarts)
16. 20 dumu 15 silà-ta	16. 20 children per 15 quarts
17. 23 dumu 10 (silà)-ta	17. 23 children per 10 (quarts)
18. 2 gemé-šu-gi ₄ 20 (silà)-ta	18. 2 old women per 20 (quarts)
19. še-bi 11 (gur) 170 (silà)-gur	19. their barley 11 bushels 170 (quarts)
20. []-me	20. they are []
III. 1. še-bi [] 120 (silà)-gur	III. 1. their barley [] bushels [] 120 (quarts)
2. ì-du ₈ -é-uš-bar-/me	2. they are porters of the house of the weavers
3. šà-lagaš ^{ki}	3. at Lagash
4. 1 gemé 100 (silà)-<ta>	4. 1 woman per 100 (quarts)
5. 4 gemé 60 (silà)-ta	5. 4 women per 60 (quarts)
6. 8 gemé 50 (silà)-ta	6. 8 women per 50 (quarts)
7. 98 gemé 40 (silà)-ta	7. 98 women per 40 (quarts)
8. 526 gemé 30 (silà)-ta	8. 526 women per 30 (quarts)
9. 54 dumu 20 (silà)-ta	9. 54 children per 20 (quarts)
10. 93 dumu 15/ silà-ta	10. 93 children per 15 quarts
11. 124 dumu 10 (silà)-ta	11. 124 children per 10 (quarts)
12. 16 gemé-šu-g[₄]/20 (silà)-[ta]	12. 16 ol[d]women [per] 20 (quarts)
13. še-bi 8[1 (gur) 17]/5 si[là-gur]	13. their barley 8[1 bushels 17] 5 qua[rts]
14. geme-u[š-bar-me]	14. [they are] female we[avers]
15. 25 []	15. 25 []
16. 60 []	16. 60 []

- IV. 1. 1 []
 2. 1 []
 3. 2 []
 4. 1 []
 5. še-bi []
 6. gír-[sè-ga-é-uš-br-me]
 7. 2 aš[lag (?)]
 8. še-bi []
 9. še-ba-[iti-da (?)]
 10. šà []
 11. 1 []
 12. 10 []
- V. 1'. 660 [gemé 40 (silà)-/] t[a]
 2'. 3381 [gemé] / 30 (silà)-t[a]
 3'. 50 lá-2 guruš 30 (silà)-[ta]
 4'. 183 dumu 20 (silà)-[ta]
 5'. 700 dumu 1 [5 silà-ta]
 6'. 1020 lá-1 dumu [10 (silà)-ta]
 7'. 123 gemé-[šu]-/gi₄ 2 [0 (silà)-ta]
 8'. še-bi 420 [] / 1 (gur) 180 [(silà)-gur]
 9'. gemé-uš-b[ar-me]
 10'. 255 [guruš 60 (silà)-ta (?)]
 11'. 20 gu[ruš 50 (silà)-ta (?)]
 12'. 42 [guruš 40 (silà)-ta (?)]
 VI. 1'. ša-gu-[a]b-b[a^{ki}]
 2'. šu-nigín 17 gemé 100 (silà)-ta
 3'. šu-nigín 210 lá-1 gemé 60 (silà)-ta
 4'. šu-nigín 20 lá-1 gemé 50 (silà)-ta
 5'. šu-nigín 1574 gemé 40 (silà)-ta
 6'. šu-nigín 61 guruš 40 (silà)-/ta
 7'. šu-nigín 4604 gemé / 30 (silà)-ta
 8'. šu-nigín 48 guruš 30 (silà)-ta
- IV. 1. 1 []
 2. 1 []
 3. 2 []
 4. 1 []
 5. their barley []
 6. [they are] pers[onnel of the
 house of the weavers]
 7. 2 ful[lers (?)]
 8. their barley []
 9. [monthly (?)] barley rations
 10. at []
 11. 1 []
 12. 10 []
- V. 1'. 660 [women] p[er 40 '(quarts)]
 2'. 3381 [women] pe[r] 30 (quarts)
 3'. 48 men [per] 30 (quarts)
 4'. 183 children [per] 20 (quarts)
 5'. 700 children [per] 1 [5 quarts]
 6'. 1019 children [per 10 (quarts)]
 7'. 123 [ol]d women [per] 2 [0
 (quarts)]
 8'. their barley 420 [] 1 [bushels]
 180 [(quarts)]
 9'. [they are] female wea[vers]
 10'. 255 [men per 60 (quarts) (?)]
 11'. 20 m[en per 50 (quarts) (?)]
 12'. 42 [men per 40 (quarts) (?)]
 VI. 1'. at Gu[a]bb[a]
 2'. total: 17 women per 100 (quarts)
 3'. total: 209 women per 60 (quarts)
 4'. total: 19 women per 50 (quarts)
 5'. total: 1574 women per 40 (quarts)
 6'. total: 61 men per 40 (quarts)
 7'. total: 4604 women per 30 (quarts)
 8'. total: 48 men per 30 (quarts)

9'. šu-nigín 473 dumu 20 (silà) -ta	9'. total: 473 children per 20 (quarts)
10'. šu-nigín 1035 dumu 1/5 silà-ta	10'. total: 1035 children per 15 quarts
11'. šu-nigín 1633 dumu /10 (silà)-ta	11'. total: 1633 children per 10 (quarts) :
12'. šu-nigín 200 lá-2 gemé-{šu}-/ šu-gi ₄ 20 (silà) -ta	12'. total: 198 old women per 20 (quarts)
VII. 1'. šu-nigín 32 [guruš 60 (silà)] -ta	VII. 1'. total: 32 [men] per [60 (quarts)]
2'. šu-nigín 14 guruš 10 (silà)-ta	2'. total: 14 men per 10 (quarts)
3'. šu-nigín 7 guruš 40 (silà) -ta	3'. total: 7 men per 40 (quarts)
4'. šu-nigín 10 lá-1 guruš 30 (silà)-ta	4'. total: 9 men per 30 (quarts)
5'. šu-nigín 2 dumu 20 (silà) -ta	5'. total: 2 children per 20 (quarts)
6'. šu-nigín 6 dumu 15 silà-ta	6'. total: 6 children per 15 quarts
7'. šu-nigín 8 dumu 10 (silà) -ta	7'. total: 8 children per 10 (quarts) :
8'. še-bi 10 (gur) 200 (silà) -gur	8'. their barley 10 bushels 200 (quarts)
9'. gír-sè-ga-é-uš-bar/-me	9'. they are personnel of the house of the weavers
10'. 983 (gur) 230 (silà) -/gur	10'. 983 bushels 230 (quarts)
11'. še-ba-iti-da	11'. monthly barley rations
12'. šu-nigín 11 guruš 4 (gur) -ta	12'. total: 11 men per 4 (bushels)
13'. šu-nigín 6 guruš 2 (gur) 120 (silà) - ta	13'. total: 6 men per 2 (bushels) 120 (quarts)
VIII. 1'. []i-[du ₈ (?)]	VIII. 1'. []por[ter(s) (?)]
2'. ašlag[]	2'. fuller(s)[]
3'. 184 g[ur]	3'. 184 b[ushels]
4'. še-ba-zag-mu-ka	4'. annual barley rations
5'. še-ba-kilìb-ba	5'. final account of barley rations
6'. gemé-uš-bar ašlag ù/ gír-sè-ga-é-uš-bar	6'. female weavers, fullers and personnel of the house of the weavers

7'. gír-su^{ki}-ta
 8'. gu₁-ab-ba^{ki}-šè
 9'. [mu] ha₁-ar^{ki}-ši/
 [hu-mur-t]ⁱ^{ki} ba-hul

7'. from Girsu
 8'. to Gu₁abba
 9'. [year] when Ha₁arshi (and)
 [Humurt]ⁱ were destroyed
 (Šulgi 48)

No 2 (BM 13837)

Obv. 1. 10 gemé 30 (silà) še (gur)/-
 lugal-ta

2. 1 gemé-š[u-g] i₄ [20 (silà)-ta]
 3. 1 [dumu 15 silà-ta]
 4. 2 dumu 10 (silà)-[t]a

Rev. 5. še-bi 1 (gur) 55 si[là-gur]
 6. še-ba-gemé-kikkén
 7. iti še-gur₁₀-kud
 8. mu kar-har^{ki} a-/rá 3-kam-aš ba-hul

Obv. 1. 10 women per 30 (quarts) of
 barley (according to) "royal"
 (bushel)

2. 1 o[l]d woman [per 20 (quarts)]
 3. 1 [child per 15 quarts]
 4. 2 children [p]er 10 (quarts)

Rev. 5. their barley 1 [bushel] 55 qua[rt]
 6. barley rations for female millers
 7. 11th month
 8. year when Karhar was destroyed
 for the third time (Šulgi 34)

No 3 (BM 14526)

Obv. 1. 11 gemé 30 (silà) še (gur)-
 lugal-ta

2. 3 gemé á- $\frac{1}{2}$ 30 (silà)-ta
 3. 1 gemé-šu-gi₄ 20 (silà)-<ta>
 4. 3 dumu 15 silà-ta
 seal impression (illegible)
 5. 1 dumu 10 (silà)-<ta>

Rev. 6. še-bi 1 (gur) 195 silà
 7. še-ba-gemé-kikkén
 8. ki inim-d^dba-Ú ì-dab₅-ta
 seal impression (illegible)
 9. kišib ur-d^dšul-pa-è

Obv. 1. 11 women per 30 (quarts) of
 barley (according to) "royal"
 (bushel)

2. 3 women of half wage per 30
 (quarts)
 3. 1 old woman per 20 (quarts)
 4. 3 children per 15 quarts

5. 1 child per 10 (quarts)
 Rev. 6. their barley 1 (bushel) 195
 quarts
 7. barley rations for female millers
 8. from Inim-Ba-Ú the "employer"
 9. seal of Ur-Šulpae

10. iti ezen-^dba-ŭ
11. mu an-ša-an^{ki}/ ba-hul

10. 8th month
11. year when Anshan was destroyed
(Šulgi 35)

No 4 (BM 15245) see p. 33

No 5 (BM 15902)

- Obv. 1. 4 gemé 3 ma-na síg-t[a]
2. 5 dumu 1 ma-n[a-t]a
3. ugula nin-si-sá
4. 5 gemé
5. 6 dumu
6. ugula ku-^dba-ŭ
7. 2 gemé-gu
8. 4 dumu
9. ugula hu-zi-ra
10. ugula lú-^dnin-dar-a
Rev. 11. šu-nigín 11 gemé
12. šu-nigín 15 dumu
13. ugula lugal-šuh-mah
14. mu ^d[nu]-muš-da/ é ku₄-ra

- Obv. 1. 4 women pe[r] 3 minae of wool
2. 5 children [p]er 1 min[a]
3. supervisor Nin-si-sa
4. 5 women
5. 6 children
6. supervisor Ku-Ba-ŭ
7. 2 female flax-workers
8. 4 children
9. supervisor Huzira
10. supervisor Lu-Nin-dara
Rev. 11. total: 11 women
12. total: 15 children
13. supervisor Lugal-su-mah
14. year when (god) [Numu]šda entered
(his) house (Šulgi 11)

No 6 (BM 14626)

- Obv. 1. 1 dam ur-^dnin-giš-zi-/da
2. 1 dam lú-gu-la
3. 1 dam ur-gar dumu lú-uraš¹
4. 1 dam na-di
5. 1 dam ur-šul
6. 1 d[am] ur-nigin-gar
7. 1 d[am] ur-ša₆-ga
8. 1 d[am] ur-gar šeš-a-ni
9. 1 [dam u]r-lal
10. 1 [dam ur-šu-]ga-lam-ma
11. [1 dam]-a
12. [1 dam]NA.DU

- Obv. 1. 1 wife of Ur-Nin-giš-zida
2. 1 wife of Lu-gula
3. 1 wife of Ur-gar son of Lu-uraš¹
4. 1 wife of Na-di
5. 1 wife of Ur-šul
6. 1 w[ife] of Ur-nigin-gar
7. 1 w[ife] of Ur-šaga
8. 1 w[ife] of Ur-gar his brother
9. 1 [wife of U]r-lal
10. 1 [wife of Ur-šu]galamma
11. [1 wife of PN]
12. [1 wife of PN]

13. [1 dam]-x
 14. [1 dam]-ša₆
 Rev. 15. 1 ki-lul-la
 16. 1 ur-^dnanše
 17. 1 ab-ba-sukkal-gal
 18. 1b-dab₅

13. [1 wife of PN]
 14. [1 wife of PN]
 Rev. 15. 1 Ki-lulla
 16. 1 Ur-Nanše
 17. 1 Abba-sukkal-gal
 18. "employers"

No 7 (Ashm. 1924.668)

- I. 1. 4 silā ī-giš
 2. dumu-tur-ra
 3. 3 me-ni-kū
 4. 3 igi-si₄-si₄
 5. 3 nin₉-kal-la
 6. 3 nin-kū-zu
 7. 3 ša-at-^dma-mi
 8. 3 nin-a-zu
 9. zah gemé-giš^šgigir
 10. 3 nin-en-ša₆
 11. 3 me-é-gal-ta
 12. 3 nin-izkum-zi
 13. 3 ī-kal-la
 14. ug₆ ki-na
 15. 3 nin-e-ba-an-ša₆
 16. 3 gemé-^da-dug
 17. 3 ama-kal-la
 18. 2 nin-nam-mah-zu
 19. 2 nin-me-a
 20. 2 nin-é-gal-e
 21. zah ^dma-mi-hi-li-sū
 22. 3 nin-mā-gur₈-ri dumu la-a-mu

 23. 3 gemé-kišib-lá
 24. 3 nin-izkum-zi
 25. zah ama-gi-na
 26. zah ama-ur₄-ša-gi dumu ur-/mes₁

- I. 1. 4 quarts of sesame-oil
 2. (to) Dumu-turra
 3. 3 (quarts to) Meniku
 4. 3 (quarts to) Igi-sisi
 5. 3 (quarts to) Nin-kalla
 6. 3 (quarts to) Nin-kuzu
 7. 3 (quarts to) Šat-Mami
 8. 3 (quarts to) Nin-azu
 9. fugitive Geme-gigir
 10. 3 (quarts to) Nin-en-ša
 11. 3 (quarts to) Me-egalta
 12. 3 (quarts to) Nin-izkumzi
 13. 3 (quarts to) Ikalla
 14. dead Kina
 15. 3 (quarts to) Nine-banša
 16. 3 (quarts to) Geme-Adug
 17. 3 (quarts to) Ama-kalla
 18. 2 (quarts to) Nin-nammahzu
 19. 2 (quarts to) Nin-mea
 20. 2 (quarts to) Nin-egale
 21. fugitive Mami-hilisu
 22. 3 (quarts to) Nin-magurri
 daughter of Lāmu
 23. 3 (quarts to) Geme-kišibla
 24. 3 (quarts to) Nin-izkumzi
 25. fugitive Ama-gina
 26. fugitive Ama-uršagi daughter
 of Ur-mes₁

- II. 1. 2 a-gal-zi dumu inim-^dšara
 2. 2 nin-é-gal-e dumu é-u₆-/e
 3. 2 munus-sig₅ dumu lú-gu-/la
 4. 2 nin₉-gi-na dumu ur-^dma-mi
 5. 2 nin-izkum-zi dumu šeš-kal-la
 6. 2 nin-izkum-zi dumu lú-du₁₀-/ga
 7. 3 geme-^da-dug dumu a-a-kal-la
 8. 2 me-é-gal-ta dumu lú-/nir-gal
 9. 3 ama-gi-na dumu lú-/du₁₀-ga
 dumu gal₅-lá-gal
 10. 3 ha-la-ama-na dumu /ur-^dsul-pa-ē
 11. 3 nin-pirig dumu tur-ra-ni
 12. ugula dumu-tur-ra
 13. 4 nin-inim-gi-na
 14. 3 gemé-^dšara
 15. 3 gemé-^dašnan
 16. 3 nin-a-zu
 17. 3 lukur-kal-la
 18. 3 nin₉-ku-li
 19. 3 dumu-tur-ra
 20. 3 gemé-^ddumu-zi-da
 21. 3 nin-zag-ge-si
 22. 3 lukur-kal-la
 23. 2 nin-nam-mah-zu

- II. 1. 2 (quarts to) Agalzi daughter
 of Inim-Šara
 2. 2 (quarts to) Nin-egale daughter
 of Eue
 3. 2 (quarts to) Munus-sig daughter
 of Lu-gula
 4. 2 (quarts to) Nin-gina daughter
 of Ur-Mami
 5. 2 (quarts to) Nin-izkumzi
 daughter of Šeš-kalla
 6. 2 (quarts to) Nin-izkumzi
 daughter of Lu-duga
 7. 3 (quarts to) Geme-Adug
 daughter of Aya-kalla
 8. 2 (quarts to) Me-egalta
 daughter of Lu-nirgal
 9. 3 (quarts to) Ama-gina daughter
 of Lu-duga son of Galla-gal
 10. 3 (quarts to) Hala-amana
 daughter of Ur-Šulpae
 11. 3 (quarts to) Nin-pirig
 daughter of Turrani
 12. supervisor Dumu-turra
 13. 4 (quarts to) Nin-inim-gina
 14. 3 (quarts to) Geme-Šara
 15. 3 (quarts to) Geme-Ašnan
 16. 3 (quarts to) Nin-azu
 17. 3 (quarts to) Lukur-kalla
 18. 3 (quarts to) Nin-kuli
 19. 3 (quarts to) Dumu-turra
 20. 3 (quarts to) Geme-Dumuzi-da
 21. 3 (quarts to) Nin-zaggesi
 22. 3 (quarts to) Lukur-kalla
 23. 2 (quarts to) Nin-nammahzu

III. 1. 2 nin-izkum-zi

2. 3 ki-dam

3. zah me-é-zi-ta

4. 2 gemé-^dli₇-si₄ dumu ur-^da-dug

5. 2 gemé-^dištaran dumu /lugal-a-ni-ša₆

6. 2 ama-é-mah-e dumu /inim-ma-dingir

7. 3 gemé-^dšara dumu lú-/^dnanna

8. 2 nam-nin-a-ni-dug dumu /da-da

9. 2 gemé-nir-gal dumu lugal-/é-mah-e

10. zah nin₉-kal-la dumu ur-sig₅-mu

11. zah gemé-^den-líl-lá dumu amar-si₄

12. 2 nin-idigna dumu /a-a-ha-ma-ti

13. 2 gemé-nir-gal dumu ga-ti-e

14. 2 ama-kal-la dumu lugal-/murub₄-e

15. 2 nin-en-ša₆dumu /kù-zu-mu

16. ugula nin-inim-gi-na

IV. 1. 3 é-lú-[nig]-ba

2. 3 [nin-ba-ur₄-ub]-du₁₀-gal

3. šu-nigín 2 lukur ì 4 silà-ta

4. šu-nigín 33 lukur 3 silà-ta

5. šu-nigín 21 lukur 2 silà-ta

6. ì-giš-bi 150 lá-l silà

III. 1. 2 (quarts to) Nin-izkumzi

2. 3 (quarts to) Kidam

3. fugitive Me-ezita

4. 2 (quarts to) Geme-Lisi
daughter of Ur-Adug

5. 2 (quarts to) Geme-Ištaran
daughter of Lugal-ani-ša

6. 2 (quarts to) Ama-emahe
daughter of Inima-dingir

7. 3 (quarts to) Geme-Šara
daughter of Lu-Nanna

8. 2 (quarts to) Nam-nin-ani-dug
daughter of Dada

9. 2 (quarts to) Geme-nirgal
daughter of Lugal-emahe

10. fugitive Nin-kalla daughter
of Ur-sigmu

11. fugitive Geme-Enlilla
daughter of Amar-si

12. 2 (quarts to) Nin-Idigna
daughter of Aya-hamati

13. 2 (quarts to) Geme-nirgal
daughter of Gatie

14. 2 (quarts to) Ama-kalla
daughter of Lugal-murube

15. 2 (quarts to) Nin-en-ša
daughter of Kuzumu

16. supervisor Nin-inim-gina

IV. 1. 3 (quarts to) E-lu-[nig]ba

2. 3 (quarts to) [Nin-baurub]dugal

3. total: 2 lukur per 4 quarts of
oil

4. total: 33 lukur per 3 quarts

5. total: 21 lukur per 2 quarts

6. their sesame-oil 149 quarts

7. 1-ba-lukur-^dšara
8. ki ur-^dšul-pa-è-ta
9. ba-zi
10. mu mā-^den-ki-ka ba-ab-du₈

7. oil rations of lukur of Šara
8. from Ur-Šulpae
9. taken
10. year when boat of Enki was "opened"
(Šu-Sin 2)

No 8 (BM 13661)

- I. 1. 1 gu₄-numun-gán-ba¹
2. 1 gu₄-numun^d nin-mar^{ki}-ka¹
3. 1 gu₄-numun¹ Ir¹
4. 1 gu₄-numun¹ ur-^dlama¹
5. 13 gurus¹-hun-gá engar¹
6. 5¹ ša-gu₄ ugula lugal-ti-ra-aš-ŠU(?)¹
7. 7 ša-gu₄ ugula a-kal¹-la
8. 4 erín ugula ur-^dnanše
9. 4 erín ugula lugal¹-sipa
10. 3 erín ugula¹ Ir-mu
11. 3 un¹-il
12. hé-dab¹-me
13. gán lú^d-nin-gír-su
14. 1 gu₄-numun¹-gán-ba
15. 1 gu₄-numun¹ a-kal-la
16. 1 gu₄-giš-diri
17. 4 gurus¹-hun-gá engar
18. 12 erín ugula¹ ur-^dnanše
19. gán ur-^dšara-^dba-ú
20. 1 gu₄-numun¹ gu₄-gùn
21. 1 gu₄ [giš-dir] i
- II. 1. [u] Ir-nin-tu šeš-[ga] 1
2. 2 gurus¹-hun-gá sanga¹
3. nin-é-nina^{ki}
4. 3 gurus¹-hun-gá sanga¹
5. lú-dingir-Ira šeš-gal¹
6. 15 erín ugula¹ Ir-mu¹

- I. 1. 1 purchased ox for sowing¹
2. 1 ox for sowing (of) Ninmarka¹
3. 1 ox for sowing (of) Ir¹
4. 1 ox for sowing (of) Ur-Lama¹
5. 13 hired¹ men (under) farmer¹
6. 5¹ ox-drivers supervisor
Lugal-tiraš¹
7. 7 ox-drivers supervisor Akal¹ la
8. 4 erín supervisor Ur¹-Nanše
9. 4 erín supervisor Lugal¹-sipa
10. 3 erín supervisor¹ Irmu
11. 3 un¹-il
12. they are conscripts¹
13. plot(of) Lu¹-Ningirsu
14. 1 purchased ox for sowing¹
15. 1 ox for sowing¹(of) Akalla
16. 1 additional ox¹ in a yoke
17. 4 hired men¹ (under) farmer
18. 12 erín supervisor¹ Ur-Nanše
19. plot (of) Ur¹ Šara-Ba-ú
20. 1 ox for sowing¹, spotted ox
21. 1 [addition]al ox¹ [in a yoke]
- II. 1. [U] Ir-Nintu šeš-[ga] 1
2. 2 hired men (under) temple steward
3. Nin-e-Nina¹
4. 3 hired men (under) temple steward¹
5. Lu-dingir-Ira šeš-gal¹
6. 15 erín supervisor¹ Irmu¹

- | | |
|--|---|
| 7. gán ur- ^d nin-giš-zi ¹ -da | 7. plot (of) Ur- ¹ Ningišzi ¹ da |
| 8. 1 gu ₄ -numun ur- ^d nin-giš-zi ¹ -da | 8. 1 ox for sowing (of) ¹ Ur- Ningišzi ¹ da |
| 9. 1 gu ₄ -numun ur- ^d ba- ¹ ú | 9. 1 ox for sowing (of) Ur-Ba- ¹ ú |
| 10. 1 gu ₄ -numun sanga | 10. 1 ox for sowing (of) temple steward |
| 11. 10 guruš-hun-gá sanga | 11. 10 hired men (under) temple steward |
| 12. ur- ^d nin-tu ¹ šeš-gal ¹ | 12. Ur-Nintu ¹ šeš-gal ¹ |
| 13. 6 guruš-hun-gá sanga | 13. 6 hired men (under) temple steward |
| 14. gemé-é-nina ^{ki} | 14. Geme-e-Nina |
| 15. 9 guruš-hun-gá ugula ur- ^d ba- ¹ ú | 15. 9 hired men supervisor Ur-Ba- ¹ ú |
| 16. 5 guruš-hun-gá ugula lugal-ti-ra-aš | 16. 5 hired men supervisor Lugal-tiraš |
| 17. 12 gurus-hun-gá sanga | 17. 12 hired men (under) temple steward |
| 18. lú-dingir-ra šeš-gal | 18. Lu-dingirra <u>šeš-gal</u> |
| 19. 7 guruš-hun-gá ugula lugal-sipa | 19. 7 hired men supervisor Lugal-sipa |
| 20. gán lú-pàd-da | 20. plot (of) Lu-padda |
| 21. 1 gu ₄ -numun-gán-ba | 21. 1 purchased ox for sowing |
| 22. 1 gu ₄ -numun-hun-gá ur-mes | 22. 1 hired ox for sowing (of) Ur-mes |
| 23. [1 gu ₄ -]giš uru ^{ki} -bi | 23. [1 ox] in a yoke (provided by ?) its "town" |
| 24. []ur- ^d iškur | 24. []Ur-Iškur |
-
- | | |
|---|---|
| III. 1. []ur-šu-ga-/lam-ma | III. 1. []Ur-šugamma |
| 2. [guruš-hun-gá <ugula> ur- ^d nanše | 2. [hired [me]n <supervisor> Ur-Nanše |
| 3. ¹ 14 (erín) ugula ¹ ir-mu | 3. ¹ 14 (erín) supervisor ¹ Irmu |
| 4. 6 ¹ DIL šà-gu ₄ ugula a-kal-la | 4. ¹ 6 (1 absent ?) ox-drivers ¹ supervisor Akalla |
| 5. [š] ¹ šà-gu ₄ ugula ¹ lugal-ti-ra-aš | 5. [o] ¹ ox-drivers supervisor ¹ Lugal-tiraš |
| 6. [gán lu]gal-dumu-še | 6. [plot (of) Lu]gal-dumuše |
| 7. ¹ 1 [gu ₄]numun ¹ níg-ú-rum | 7. ¹ 1 [ox]for sowing ¹ (of) Nigurum |
| 8. ¹ 1 gu ₄ -numun ¹ ur-ki-gu-la | 8. ¹ 1 ox for sowing ¹ (of) Ur-kigula |
| 9. ¹ 13 (erín) ugula ¹ lugal-sipa | 9. ¹ 13 (erín) supervisor ¹ Lugal-sipa |
| 10. ¹ 11 DIL ¹ (erín) ugula ur- ^d ba- ¹ ú | 10. ¹ 11 (1 absent ?) (erín) supervisor ¹ Ur-Ba- ¹ ú |

11. ḡán¹ ur-^dba-^U
12. 1 gu₄ -giš¹] -gu
13. 9 (erín) ugula ur-^dnanše
14. ḡán d¹ nin-mar^{ki} -ka
15. 1 gu₄ -numun¹ -ḡán-ba
16. 5¹ šà-gu₄ ugula lugal-ti-ra-aš
17. 5 (erín) ugula¹ ur-^dnanše
18. 5 (erín) ugula¹ lugal-sipa
19. ḡán lú-¹ giri₁₇ -zal
20. ḡa-šà¹ en-nu-lum-ma
21. 1 gu₄ -numun-ḡán-ba
22. 10 lá-1 (erín) ugula ur-^dba-^U
23. 5 šà-gu₄ ugula lugal-ti-ra-aš-ŠU (?)

24. 5 gurus¹ -hun-ḡá engar
25. ḡán ur-^(ki) -gu-la

- IV. 1. []
2. 20 [gu₄ -numun]
4 [un-¹l]
91 [gurus¹ -hun-ḡá]
140 [erín ù šà-gu₄] -me
 3. ugula s[anga-^d] nin-ḡir-su
 4. 1 g[u₄ -numun-]ḡán-ba
 5. 8 [dumu-dab₅ -ba] ḡugula¹ nam-mah
 6. ḡán [ur-^d] ḡha-ja¹
 7. 1 gu₄ -[] ḡugal-dingir-mu¹
 8. 5 dumu-[dab₅ -ba ugula] ḡnam-mah¹
 9. ḡán é-a-ḡlú-bi¹
 10. 1 gu₄ -numun-ḡán-ba¹
 11. 5 dumu-dab₅ -ba ḡugula šu-eš-dar¹
 12. ḡán₁ lu-sag-ḡub^{ki}

11. ḡplot¹ (of) Ur-Ba-^U
12. 1 ox¹ for sowing [of PN]
13. 9 (erín) supervisor Ur-¹Nanše
14. ḡplot¹ (of) Ninmarka
15. 1¹ purchased ox for sowing¹
16. 5¹ ox-drivers supervisor
Lugal-tiraš
17. 5 (erín) supervisor¹ Ur-Nanše
18. 5 (erín) supervisor¹ Lugal-sipa
19. ḡplot (of) Lu-¹ girizal
20. ḡfield¹ Ennulumma
21. 1 purchased ox for sowing
22. 9 (erín) supervisor Ur-Ba-^U
23. 5 ox-drivers supervisor Lugal-
tiraš

24. 5 hired men (under) farmer
25. plot (of) Ur-kigula

- IV. 1. []
2. they are: 20 [oxen for sowing]
4 [un-¹l]
91 [hired men]
140 [erín and ox-drivers]
 3. supervisor S[anga-] Ningirsu
 4. 1 purchased o[x for sowing]
 5. 8 [conscripted men] ḡsupervisor¹
Nammah
 6. plot (of) [Ur-] ḡHaya¹
 7. 1 ox [] (of) ḡLugal-dingirmu¹
 8. 5 [conscripted] men [supervisor]
ḡNammah¹
 9. plot (of) Ea-ḡlubi¹
 10. 1 ḡpurchased¹ ox for sowing
 11. 5 conscripted men ḡsupervisor
Šu-Ištar¹
 12. ḡplot₁ (of) Lu-Sag¹ub¹

13. 1¹ gu₄-numun-^gán-ba¹
 14. 1¹ gu₄-numun-hun-gá¹ ur-^dšul-/pa-è¹
 15. 10¹ dumu-dab₅-ba ugula ^šu-eš-dar¹
 16. ^gán¹ ur-^diškur¹
 17. 5 gu₄-^{numun}¹
 30 lá-2 dumu-^{dab}₅-ba¹
 18. ^ugula¹ á-^{gu}-gu¹
 19. ^a-šà lugal-nam-tar-ri¹
 20. [u₄] 13-kam¹
 21. [iti] ^{ezen}-^dšul-gi¹

13. 1 purchased ox for sowing
 14. 1 hired ox for sowing (of)
 Ur-Šulpae¹
 15. 10 conscripted men supervisor
 Šu-Ištar¹
 16. plot (of) Ur-Iškur¹
 17. 5 oxen for sowing¹
 28 conscripted men
 18. supervisor A^{gugu}¹
 19. field Lugal-namtarri¹
 20. 13th [day] (of)
 21. 7th [month]

No 9 (BM 13110)

- Obv. 1. 1 gu₄-numun-^gán-ba¹
 2. 1 gu₄-numun ka₅-a¹
 3. 1 gu₄-numun ^dnin-mar^{ki}-ka¹
 4. 1 gu₄-numun lugal-dumu-šè¹
 5. ^gán lú-giri₁₇-zal¹
 6. 1 gu₄-numun-^gán-ba¹
 7. 12 gurus-hun-gá sanga¹
 8. a-kal-la šeš-gal¹
 9. ^gán ur-^dnin-giš-zi-da¹
 Rev. 10. a-šà en-nu-lu-ma¹
 11. u₄ 6-kam iti ezen-^d/ba-ú¹

- Obv. 1. 1 purchased ox for sowing
 2. 1 ox for sowing (of) Kaa¹
 3. 1 ox for sowing (of) Ninmarka¹
 4. 1 ox for sowing (of) Lugal-dumuše¹
 5. plot (of) Lu-girizal¹
 6. 1 purchased ox for sowing
 7. 12 hired men (under) temple
 steward¹
 8. Akalla šeš-gal¹
 9. plot (of) Ur-Ningišzida¹
 Rev. 10. field Ennulumma¹
 11. 6th day (of) 8th month

No 10 (BM 15406)

- Obv. 1'. ^{xx} []
 2'. a-šà PI.LI. [HA]
 3'. ^gán ur-ša₆-ga¹
 4'. 1 gu₄-numun 2 gurus-hun-gá al-10-
 sar- [ta]
 5'. a-šà a-ka-sahar¹
 6'. ^gán lugal-sipa¹

- Obv. 1'. ^{xx} []
 2'. field PI.LI. [HA]
 3'. plot (of) Ur-šaga¹
 4'. 1 ox for sowing, 2 hired men
 10 sar [per] spade¹
 5'. field Akasahar¹
 6'. plot (of) lugal-sipa¹

7' 4 gu ₄ -šudul 10 lā-l erín 2 gurus-hun-gá	7'. 4 yoked oxen 9 <u>erín</u> 2 hired men
8'. ugula ur- ^d nu-muš-da	8'. supervisor Ur-Numušda
9'. 1 gu ₄ -numun 3 h[é]-dab ₅ 1 gurus-hun-gá-ú-ku ₅	9'. 1 ox for sowing, 3 c[on]scripts, 1 hired man cutting grass
10'. a-šà PI.LI.HA	10'. field PI.LI.HA
11'. <u>g</u> án ur-mes	11'. <u>p</u> lot (of) Ur-mes
Rev. 1. 2 erín-al 2 gu ₄ -numun 12 hé-[dab ₅]-ú-ku ₅	Rev. 1. 2 <u>erín</u> (with) spades 2 oxen for sowing, 12 cons[cripts] cutting grass
2. a-šà a-ka-sahar	2. field Akasahar
3. gán ùr-ri-ba-du ₇	3. plot (of) Urribadu
4. 3 gu ₄ -uru ₄ 15 hé-dab ₅ 2 erín 1 gurus-hun-gá	4. 3 ploughing oxen 15 conscripts 2 <u>erín</u> , 1 hired man
5. ugula ur- ^d ba-ú	5. supervisor Ur-Ba-ú

No 11 (BM 16453) see p. 131

No 12 (BM 16449)

Obv. 1. [1] a-wi-il- ^d na-bi-um	Obv. 1. [1] Awil-Nabium
2. mār 'a'-bi-er-še-tim awil èš-nun-na ^{ki}	2. son of 'A'bi-eršetim man of Eshnunna
3. ša mu-na-wi-rum iššakkum awil èš-nun-na ^{ki}	3. of Munawirum the farmer, man of Eshnunna
4. ša ^d da-gan-ma-an	4. whom Dagan-mān
5. iš-tu mu-ti-a-ba-al ^{ki}	5. from Mutiabāl
6. ú-ša-ri-a-am	6. sent here
Rev. 7. [NÍG.] BA šarrim a-na ^d ra- <u>ma</u> -nu-um	7. [pre]sent of the king to Ra _{ma} num
8. nam-ha-ar-ti i _{lum} -ì-lí	8. received by I _{lum} -ilī
9. <u>SANGA</u> ^d ra- <u>ma</u> -nu-um	9. <u>temple steward</u> of Ra _{ma} num
10. [ZI.] 'GA' NÍG.ŠU ^d sîn-še-mi	10. [re]moved from the authority of Sîn-semī
11. <u>wakil</u> a-si-ri	11. overseer of captives
12. [iti] šabātum U ₄ 22-KAM	12. 22d day of Shebat
13. MU ri-im- ^d a-nu-um šarrum	13. year "Rim-Anum the king" (Rim-Anum 1)

No 13 (BM 16438)

- Obv. 1. 1 a-ha-am-ar-šī
 2. awīl èš-nun-na
 3. ŠÀ 47 lū a-si-ri
 4. awīlū èš-nun-na ša da-gan-ma-an
 5. ú- ša-ri-a-šū-nu
 Rev. 6. na m-har-ti a-pil-d amurru
 7. mar ir-ši-ja
 8. ZI.GA NÍG.ŠU d sin-še-mi
 9. wakīl a-si-ri
 10. [iti_{sa}] bātum U₄ 30-KAM
 11. [MU r]i-im-d a-nu-um LUGAL.E

- Obv. 1. 1 Aham-aršī
 2. man of Eshnunna
 3. among 47 captives
 4. men of Eshnunna whom
 Dagan-mān
 5. sent here
 6. received by Apil-Amurru
 7. son of Iršiya
 8. removed from the authority
 of Sin-šemī
 9. overseer of captives
 10. 30th day of [She] bat
 11. [year "R"]im-Anum the king"
 (Rim-Anum 1)

The text in the Ashmolean Museum (1924.668) is unpublished
and may not be quoted in print until the authorized first
edition has been published by Dr. J-P. Grégoire in his
forthcoming catalogue of Sumerian Non-Literary Texts in the
Ashmolean Museum, Oxford.